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ALBANY

MEDICAL ANNALS

Journal of the Alumni Association of the
Albany Medical College

VOLUME XXIII

Ασφαλὲς καὶ ἔμπεδον ἔστω τὸ σὸν ἕδος. Ἐκ σκότου μὲν ἔξαγε
φάος, ἐκ δὲ πάθους ἀναψυχήν

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ALBANY
MEDICAL ANNALS

Original Communications

RÉSUMÉ OF THE SUBJECT OF ACTINOMYCOSIS WITH REPORT OF A CASE OF ACTINOMYCOSIS ABDOMINALIS.*

BY A. VANDER VEER, M. D.,
Dean of the Faculty, and Professor of Didactic, Abdominal and Clinical Surgery, Albany Medical College;
AND
ARTHUR W. ELTING, M. D.,
Lecturer on Surgical Pathology, Albany Medical College.

Mr. President:

In presenting this paper I desire to express my appreciation of the work done by my associate, Dr. Elting, who has contributed so much in the careful study of the subject, which will be noted by the reference made to the various authors, French and German especially.

Actinomycosis is an infectious disease common to man and many of the domestic animals, caused by a polymorphous fungus belonging to the genus of oöspores. The fungus was first recognized by von Langenbeck in 1845 in a carious disease of the lumbar vertebrae of a man. Lebert in 1857 described in detail a case of thoracic actinomycosis observed by Louis in 1848, and in his atlas published excellent cuts of the actinomyces. Lebert, however, believed these fungi to be the débris of cysticerci. In the years from 1868 to 1875 the so-called sarcomata of the jaws of cattle were carefully studied by Rivolta and Perroncito and shown to be due to the actinomyces. At about the same time Bollinger began the study of "Lump Jaw" in cattle and recognized the characteristic fungus which he referred to the botanist Harz, who classified it and gave to it the name of actinomyces.

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*Read before the Medical Society of the State of New York. October 15, 1901.

The first important appearance of actinomycosis in human pathology dates from the work of Israel, published in 1878. The identity of the bovine and human actinomyces was at first disputed, but the researches of Israel and Ponfick appear to have settled the question in the affirmative, even before the transmissibility of the disease from man to animals, and vice versa, had been proven by inoculation experiments.

The early attempts at inoculation were unsuccessful, but in 1880 Johne succeeded in producing the disease in a cow by inoculating some of the actinomycotic granules obtained from another animal of the same species. Similar experiments upon others of the domestic animals were successful and in 1883 Israel first successfully inoculated the human actinomyces into a rabbit.

From 1880 to 1890 the new disease was studied with great care in Germany, both from the etiological and pathological standpoints. The clinical features of the infection also began to attract attention and a variety of clinical forms were distinguished.

During that decade two articles were published which deserve especial attention: (1.) the classical monograph of Israel, which appeared in 1885, and which included a report of 37 cases of human actinomycosis and presented a study of the disease to which comparatively little has been added since; (2.) the monograph of Böstrom in which the subject of human actinomycosis was most carefully considered and especial attention paid to the transmissibility of the disease by means of vegetable life.

During the past decade much interest has been aroused in the disease in France, as evidenced by the numerous excellent publications upon the subject and especially the exhaustive monograph by Poncet and Berard.

In America the disease has progressively attracted more attention until to-day the American literature upon the subject is quite extensive and the disease is no longer regarded as of extremely infrequent occurrence.

There has been, and still is, more or less difference of

To Illustrate the Article by Dr. Vander Veer and Dr. Elting, on a "Resume of the subject of Actinomycosis, with Report of a Case of Actinomycosis Abdominalis."

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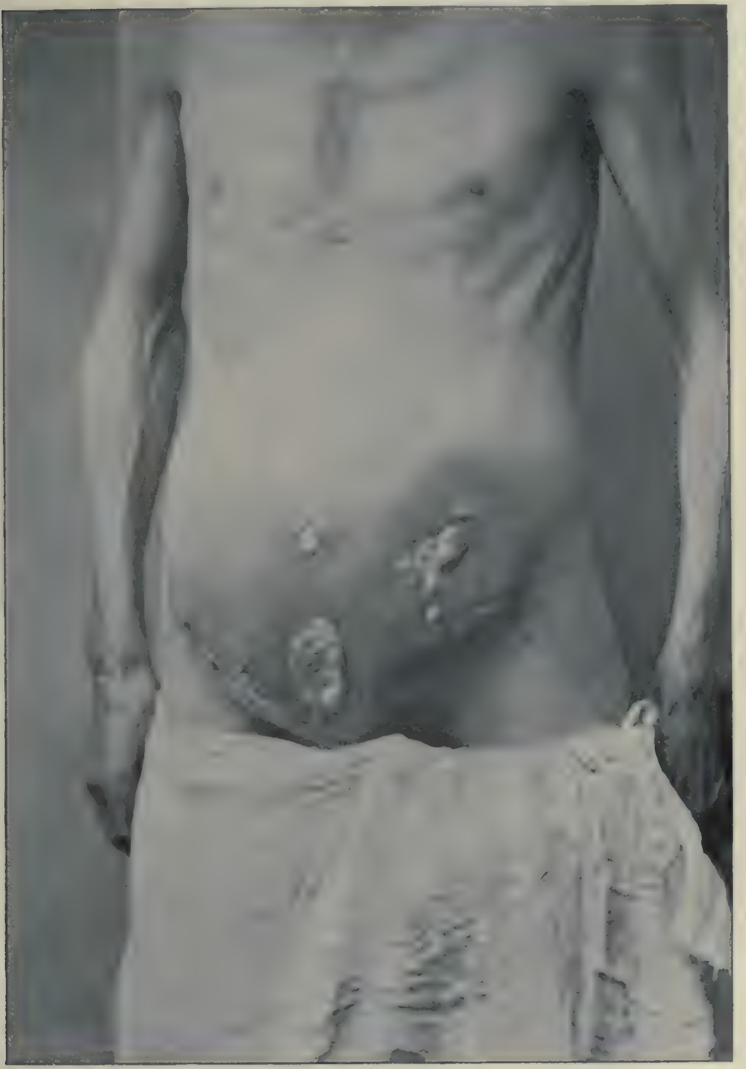

PLATE 1

opinion as to the exact botanical classification of the actinomyces, resulting largely from the marked pleomorphism manifested by the microörganism, as well as its capacity for the infection of a great variety of animals. The above fact is evidenced by the great variety of names that have been proposed for the fungus as *Bacterium Actinocladothrix* by Affanasjeff, *Nocardia Actinomyces* by Terni and Trevisan, *Streptothrix Actinomyces* by Doria, *Nocardia Bovis* by Blanchard.

The true distinction between actinomycosis, Madura foot, and the group of pseudo-actinomycoses, was first clearly established by Blanchard in 1895.

In the infected tissue, the contents of abscess cavities or the discharge from fistulous passages, one usually finds the actinomyces present in the form of small, yellowish, more or less opaque granules, varying in size from .15 to .75 mm., although larger granules often occur. In their earliest stage the granules are usually grayish white, transparent, and are easily broken up, the consistency being that of a soft jelly. As the granule grows older it tends to become more opaque and more yellow and finally it may become impregnated with calcium salts giving rise to a structureless concretion. This gradual transformation of the granule is the result of the metamorphosis of its constituent elements. In the early stages the granules are composed of homogeneous fine threads which later on become thicker and at their ends present bulbous swellings. Gradually the threads assume a more and more compact and intricate arrangement and the bulbous swellings are arranged radially about the periphery of the granule. The mycelium usually appears as a bacillus from 3-6μ in length, arranged in threads with numerous branches. These threads frequently stain very irregularly and often present somewhat of a streptococcus appearance. Böstrom and most observers regard these coccus forms as spores. The bulbous swellings often seen about the periphery of the granules are now regarded as a product of degeneration of the mycelium.

The actinomyces stain readily with the ordinary basic aniline dyes and are not decolorized by Gram's method, while the bulbous swellings, already referred to, stain only with acid dyes. This change in the staining properties of the bulbs is evidently the result of the degenerative process through which they are developed.

The actinomyces is a facultative anaerobe and grows upon most of the ordinary bacteriological media. The most favorable temperature is from 33° to 37°C., and even under these conditions development of the cultures is usually slow, requiring from five to fifteen days. Very often the actinomyces are mixed with some other microörganism, the growth of which is more vigorous, and tends to obscure the actinomyces. The microörganisms most commonly found in association with the actinomyces, have been the staphylococci, the streptococci, the colon bacillus, and the leptothrix buccalis. There also appears to be an antagonism between the actinomyces and the associated microörganisms as a result of which the virulence of the actinomyces is often rapidly attenuated. The actinomyces also possesses a surprising ability to develop upon cereals, as well as upon vegetable media in general. The growth of the fungus is arrested by a temperature of 45°C. and at 60°C. it is rapidly destroyed.

The spores are more resistant to injurious agencies than is the mycelium although less so than the spores of bacteria.

An interesting fact is the greater resistance to noxious agencies possessed by the spores, when grown upon cereals. Experiments by Berard and Nicolas have shown that the spores have lived as long as four years upon certain cereals and under unfavorable conditions.

The actinomyces does not appear to produce any active toxine in the cultures.

Positive results following inoculation experiments have been somewhat uncertain, both with the cultures as well as with the direct products of the lesion. In the majority of instances these experiments have been failures, although Ponfick, Hanau, Wolff, Israel, Johne and Böstrom have reported positive results. There are a few cases on record in which it seems probable that man has contracted the disease from animals, but it would appear that prolonged, intimate and close contact is necessary to produce an infection. All this seems to indicate that the virulence and infectiousness of the actinomyces are diminished in the animal organism.

The consensus of opinion is that the great carriers of the actinomycotic contagion are the different forms of cereals, especially barley, and it is mainly through their agency that man and the domestic animals become infected. In certain cases pieces of cereal grains have been found in the focus of infection and the history of the case has been such as to point almost definitely to their being the source of infection. Vegetables, especially those grown above the ground, may also convey the contagion to both man and animals.

Men are much more frequently affected than women, probably as a result of their being more exposed to infection. Of 357 cases of human actinomycosis cellected by Hutyra one-third occurred in the third decade.

Five chief avenues of infection have been distinguished:

(1.) through the mouth and pharynx;

(2.) through the respiratory tract;

(3.) through the gastro-intestinal tract;

(4.) through the skin, wounds, etc., and

(5.) a group of cases, in which no definite portal of entry is discoverable.

The debut of an actinomycotic lesion is accompanied by a more or less marked phagocytosis, the cells being of both an epithelioid and a leucocytic character. Should the protective activity of these cells gain the upper hand the lesion will be a slight and insignificant one. The process, however, usually extends and the degeneration of the tissue, together with the accumulation of leucocytes, may give rise to a seropurulent focus and this without the intervention of any secondary infection. This product of necrobiosis is, however, to be distinguished from pus in the stricter sense of the word.

Microscopically a focus of actinomycotic infection is characterized by a central zone containing the fungus either free or attached to the foreign body by means of which it gained access to the part. In this zone there is more or less cellular detritus and products of degeneration. Next comes a zone characterized by the presence of round cells and epithelioid cells, the degeneration of which supplies the detritus already alluded to. The outermost zone of the actinomycotic focus is characterized by a more or less extensive area of granulation tissue. As in any chronic inflammatory process so in an actinomycotic focus giant cells are often seen. The blood vessels in the immediate vicinity of the focus are but rarely obliterated.

All the actinomycotic lesions may be divided into two great classes:

(1.) the neoplastic type, which is the one usually found in horses and cattle, and

(2.) the inflammatory type, which is the one usually found in man and hogs.

The neoplastic type of lesion usually occurs in very vascular tissues which are capable of an intense reaction and which often result in the production of a fairly-well defined indurated area clinically resembling sarcoma. The neoplastic type represents an attenuated form of the disease which does not possess marked invasive properties and is the form in which spontaneous recovery not infrequently occurs, the granulation tissue tumor representing nature's method of overcoming the infection.

In the inflammatory type the process of destruction exceeds in rapidity and intensity that of defense. The process tends to extend through the connective tissues and avoids, so far as possible, parenchymatous tissue, in which opposition to extension seems to be more vigorous. The inflammatory type tends to the production of sinuses but does not tend to the development of large abscess cavities which are usually the result of a secondary infection. The rapidity of development, as well as the nature of the lesion, depend more upon the differences in resistance manifested by the tissues than upon the initial virulence of the parasite.

The muscles are not favorable sites for the development of actinomycotic foci, probably because of the small amount of connective tissue present. The bones, too, afford a very unfavorable medium for the development or extension of the process.

The tendency to the formation of fistulous passages is quite characteristic. The discharge from these fistulae may present marked differences. In some instances it is serous, in others sero-purulent, and in still others distinctly purulent. The discharge usually contains the actinomycotic granules in varying number. If the case has existed a considerable

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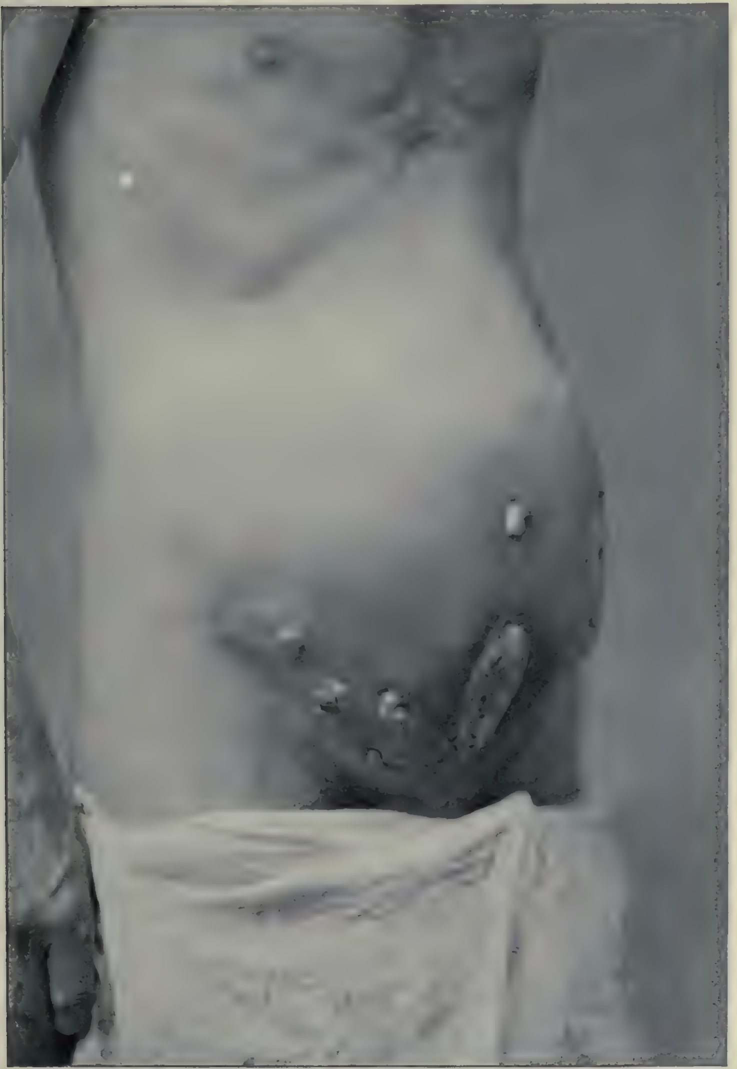

PLATE 2

period of time and shows evidences of improvement it may be difficult to find the characteristic granules. In fistulous cases secondary infection practically always exists.

Another of the characteristic features of actinomycotic lesions is the tendency to extend by continuity, rather than by metastasis. Metastasis does, however, often occur and usually takes place through the blood channels. Metastasis through the lymphatic channels is of very rare occurrence and involvment of the regional lymphatic glands is also rare unless secondary infection has supervened.

Poncet and Berard propose a division of actinomycotic infections into the following groups:

(1.) cervico-facial; (2.) thoracic; (3.) abdominal; (4.) cutaneous. Foci in bone, the spinal column, the genito-urinary organs, the brain, special organs of sense, etc., are regarded as complications.

From a considerable number of statistics it would appear that about fifty-five per cent. of the cases were of the cervico-facial type; about twenty per cent. of the thoracic and pulmonary type; about twenty per cent. of the abdominal type and about five per cent. of a variety of types.

In the abdomen, actinomycosis involves primarily only a single group of organs, i. e., the gastro-intestinal tract. There has never been a definitely authenticated case of primary abdominal actinomycosis reported which had not originated from the gastro-intestinal tract. There is no microörganism which can cause such extensive destruction of the abdominal viscera as the actinomyces. This results partly from the slow extension of the process allowing the formation of extensive adhesions, and partly from the opportunities afforded for the development of a secondary infection. Adhesions and abscesses then are the characteristic features of abdominal actinomycosis, the abscesses always resulting from a secondary infection.

The actinomyces gains access to the stomach along with the food, either animal or vegetable, most commonly the latter. Neither the gastric juice or the bile appear to have any very decidedly harmful effect upon the fungus.

The different portions of the alimentary tract seem to be affected in direct proportion to the length of time which the intestinal contents remain in the different parts. For the development of an actinomycotic focus it would seem necessary to assume the existence of some lesion, however slight, of the mucosa. Once having penetrated the mucosa two modes of progression of the fungus are possible, first, a superficial involvement of the mucosa or secondly a penetration into the deeper structures without leaving behind any demonstrable defect of the mucosa. The latter mode of progression explains why with the extensive involvement of the abdominal viscera it is frequently impossible to locate the portal of entry.

Intestinal actinomycosis appears first as a small nodule in the submucosa which undergoes degeneration at its centre and presently gives rise to a small ulcer with undermined edges, which may extend either by progression or by confluence of several small ulcers. The base of the ulcer presents a granulating surface dotted with the characteristic granules and the mucosa about the ulcer is reddened. In certain instances the ulcers heal leaving irregular pigmented scars. It is very rarely that these early lesions are seen and they have been best described by Chiari. As the process extends there is a decided tendency for the involved portion of the intestine to become adherent to other portions of the intestine, the abdominal viscera or the abdominal wall. The extensive and widespread adhesions prevent, in most instances, a perforation into the general peritoneal cavity. When the process originates from the colon, i. e., from a portion of the intestine not provided with a mesentery, a retroperitoneal abscess is not an uncommon complication. This involvement of the retroperitoneal tissues may extend from the cul-de-sac of Douglas to the diaphragm, denuding the vertebral column, attacking the kidneys, liver and other viscera, and in some instances extending even through the diaphragm into the pleural cavity. The usual outlet in such cases is either through the ischio-rectal fossa or the pleural cavity into the intercostal spaces or a bronchus. Most peri-anal actinomycotic fistulae are of this origin.

If the process originates from the small intestine, caecum or appendix the tendency is for the disease to attack the anterior abdominal wall, which is by no means an uncommon event in the course of the disease. When the anterior abdominal wall is attacked there is a marked reaction in the subperitoneal tissue which undergoes a decided thickening. The muscles are invaded, become markedly degenerated and eventually present more or less extensive areas of necrosis and suppuration. As the process approaches the surface the abdominal walls assume a board-like character, the skin becomes livid, ulcerates and sinuses are formed, the discharge from which contains the actinomycotic granules. These cases invariably present a secondary infection and a great variety of microörganisms may be found, the colon bacillus, however, being one of the most constant. The process may also extend beneath Poupart's ligament into the thigh or may involve the hip-joint. Occasionally a perforation of one loop of intestine into another occurs and in some instances the intestine adherent to the abdominal wall has perforated externally, forming a fecal fistula. Perforation into the bladder is of very rare occurrence, although cases have been reported by Böstrom, Hesse, Billroth and others. The prostate has, in a few instances, been involved by extension of the disease from the rectum.

In women the pelvic viscera have sometimes been extensively involved by extension of the process from the primary intestinal focus.

Another method of extension of the disease in the abdominal cavity is by metastasis through the blood current. In all the literature Grill was unable to find a single authentic case in which abdominal actinomycosis had extended through the lymphatic channels. In all cases where an enlargement of the regional lymphatic glands has occurred, it has been found to be due to a secondary infection. Metastasis, in the great majority of cases, takes place through the veins rather than the arteries and in the abdominal cavity it usually occurs along the course of the portal vein.

Among the secondary lesions of abdominal actinomycosis those of the liver are the most frequent. The preponderance of evidence seems to favor the assumption that practically all actinomycotic foci of the liver are secondary to some other focus in the body and that the liver is involved either by continuity, contiguity or metastasis.

In twenty of the thirty cases of hepatic actinomycosis collected by Aribaud the primary focus was intestinal. In eight of these twenty cases the liver was involved by contiguity and in twelve by metastasis. When resulting from metastasis the hepatic foci are deeper, more numerous, smaller and have more of a tendency to suppuration. The kidney and spleen are but rarely involved either by contiguity or metastasis.

In from fifty to sixty per cent. of the cases of abdominal actinomycosis the primary focus is in the caecum, appendix or contiguous portions of the ileum and colon, *i. e.*, in the right iliac fossa. In from ten to fifteen per cent. of the cases the primary focus is in the rectum. Primary foci in the stomach are exceedingly rare, the most authentic of this variety being those of Israel and Grill. In comparatively few cases has the primary focus occurred in the small intestine. There thus remain a certain number of cases of abdominal actinomycosis in which the primary focus is undetermined even though careful post-mortem examinations have been made. Furthermore the possibility of involvement of the abdomen either by extension or metastasis from the thorax, must be borne in mind.

Grill has distinguished three typical periods in the course of abdominal actinomycosis:

(1.) the initial period;
(2). the period of tumor formation;
(3.) the period of fistula.

To these three periods Hinglais has added a fourth, a period of repair.

Although in certain cases this or that period may predominate or be entirely absent, nevertheless, the periods mentioned are usually characteristic of the disease, when localized in the abdomen.

The initial period. In many cases the onset is fairly sudden and manifests itself by a catarrhal disturbance of the intestine, associated at times with diarrhoea and vomiting, and at times with constipation. In certain cases the early symptoms closely simulate recurrent appendicitis. The duration of the initial symptoms is very variable. They may

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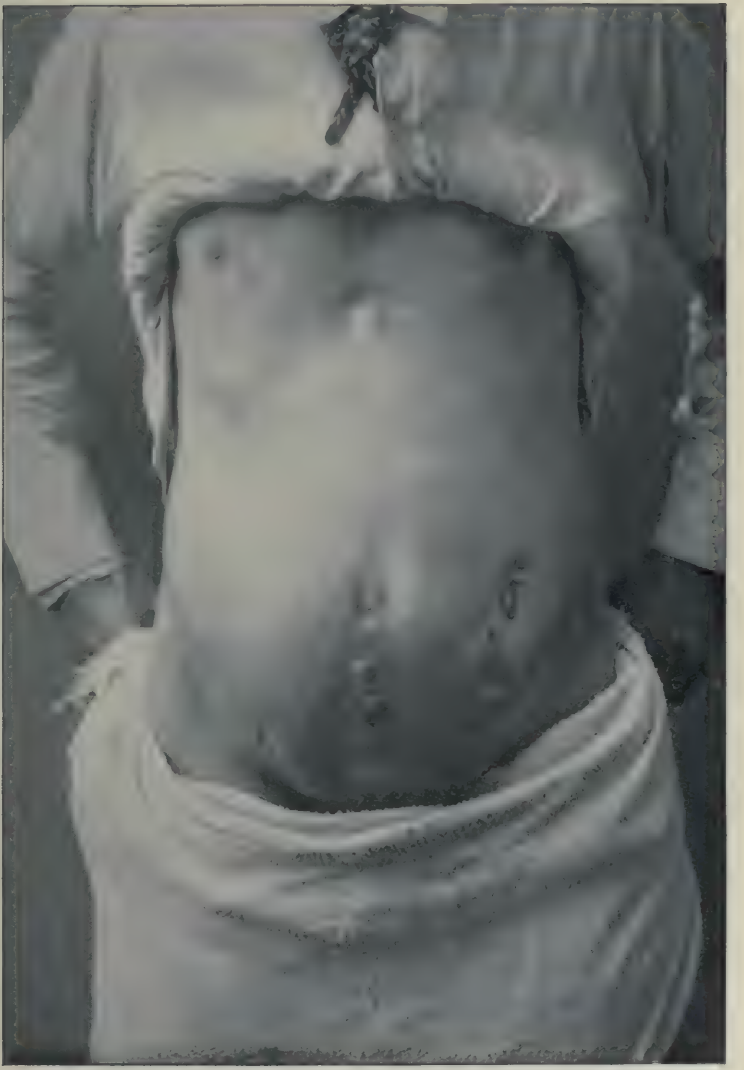

PLATE 3

last for weeks or months or may pass rapidly into the period of tumor. Peritoneal symptoms are uncommon in the early stages of the disease. There are also a certain number of cases in which no initial symptoms occur and in which the *second*, or *period of tumor*, is the first manifestation of the disease. This in most cases is the first striking symptom. The tumor may present in a variety of places, usually, however, in the right iliac or umbilical regions. The extent of the tumefaction is very variable. In some cases a considerable portion of the abdominal wall is involved, while in others the tumor is limited to a small area. The outline of the tumor is usually indefinite, indistinct and irregular. Pain, while usually present, is rarely severe, and is rather a sensation of tension and discomfort. The tumor may remain stationary for a considerable period of time but softening is apt to begin at the centre and gradually makes its way to the surface, the skin over the tumor becoming reddened, often livid, and one is surprised to find that such a condition, suggesting phlegmon, is rarely accompanied by much discomfort or febrile reaction. This process leads directly to the *third*, or *period of fistula*, for but rarely do the lesions show a tendency to recover spontaneously at the end of the second period. Associated with the formation of fistulae the surrounding skin assumes a bluish-violet tint which changes to almost a slate color as one passes from the centre toward the periphery of the involved area and, which, according to Volkmann, Böstrom and Bernhardt is sufficiently characteristic to allow a diagnosis of actinomycosis. Once begun the process of softening usually progresses rapidly and multiple fistulous tracts are developed. The character of the discharge varies with the nature of the secondary infection. In some cases it is a grayish serous fluid with a marked fecal odor, in other cases the fluid is of a clear serous character and is inodorous, while in still others it may be distinctly purulent. In rectal actinomycosis the fistulae usually open about the anus and occasionally in the loin or above the pubis. Spontaneous recovery is possible even though there is an extensive infiltration of the abdominal wall with numerous fistulae. This leads up to the *fourth* or *period of cicatrization*, in which the tumefaction gradually lessens, the discharge ceases and the fistulae slowly close, leaving, finally, nothing but irregular areas of pigmented scars.

The duration of the disease is quite variable from a few weeks to several years.

The prognosis in cases of abdominal actinomycosis even though the process may be an extensive one is not necessarily hopeless for there are on record a considerable number of cases that have recovered. In general one can say that those cases offer the best prognosis which are most amenable to surgical treatment, and it is for this reason that the prognosis is more favorable in the abdominal form than in the thoracic. The tendency to recurrence must, however, be borne in mind and this appears to be of more frequent occurrence than in the other forms of actinomycosis. The oldest cases are the most unfavorable because of the possibilities offered by them for extension or metastasis.

In seventy-seven cases of abdominal actinomycosis treated surgically Grill found twenty-two recoveries, ten improvements and forty-five deaths.

It is practically impossible to recognize the abdominal form of actinomycosis in its earliest stage, although the examination of the fecal matter has, in a few instances, led to a comparatively early diagnosis. In the later stages, when tumefaction is extensive, with foci of suppuration and numerous fistulae, the discharge from which contains the characteristic granules, the diagnosis is comparatively easy.

In the right iliac fossa it most closely resembles appendicitis, although there is less pain, less febrile disturbance and more of a tendency to extension of the process than is ordinarily seen in subacute or chronic appendicitis. Sarcoma, carcinoma and tuberculosis of the caecal region must also be considered in differential diagnosis.

The question of prophylaxis is an unsatisfactory one because of the difficulty of preventing the ingress of the actinomyces into the body. Vegetable contagion being, in all probability, the great source of human actinomycosis, greater care in the selection and preparation of cereals and vegetables would certainly diminish the number of infections by this avenue. Since thorough cooking destroys the spores of the actinomyces in flesh, prevention of infection from this source would appear to be comparatively easy.

Therapeutically a so-called specific for actinomycosis has never been discovered. There exists in certain quarters an idea that potassium iodide possesses certain of the qualities of a specific in this infection. This has resulted chiefly from the work of certain veterinarians and particularly the work of Thomassen of Utrecht who, in 1885, expressed such a sentiment as the result of the favorable action of the iodide in certain cases of actinomycotic glossitis. Certain it is that a considerable percentage of the cases in human beings have been benefitted by a prolonged course of iodide of potassium and some of them definitely cured. It is necessary to administer the iodide in large doses beginning with half a drachm and gradually increasing until from two to four drachms are taken in twenty-four hours. Rydgier recommends the injection of a one per cent. solution of potassium iodide into the tissues involved.

Poncet and Berard express the belief that in the treatment of the majority of cases of visceral actinomycosis, potassium iodide is not of great value, especially in the later stages when secondary infection has occurred. In general, potassium iodide appears to act more satisfactorily and effectually the earlier in the course of the disease it is administered. Experiments have shown that the iodide has little or no effect upon the growth of the actinomyces on artificial media.

Various observers have tried the effect of tuberculin upon the actinomycotic process and in a few instances reported by Billroth, Kahler and others, improvement seems to have followed its use. An interesting and important fact brought out by Kahler, Illich and Wolff, and confirmed by Arloing, is that men and animals infected with actinomycosis react to Koch's tuberculin just as men and animals with tuberculosis do.

Ziegler has reported a favorable result in a case of actinomycosis following the injection of the protein obtained from cultures of the staphylococcus pyogenes aureus. Gautier has seen favorable results follow the use of electrolysis, and Braun recommends highly the use of Fowler's solution and other preparations of arsenic. In general, however, combined medical and surgical treatment would appear to have produced the best results and especially is this true in the forms of actinomycosis more superficially placed.

The surgical treatment of all cases amenable to operation should be practised combined with large doses of potassium iodide. In the abdominal and visceral lesions it is frequently difficult to determine the extent of the process and consequently the extent of the surgical intervention required. Careful exploration of the fistulae and foci should be practiced, so far as possible, with the removal of as much of the diseased tissues as possible. If apparent recovery should occur the case should, nevertheless, be watched for several years because of the great possibility of recurrence.

M. A. S., Castleton, N. Y., aet. 45; native of U. S.; occupation, carpenter; married. Admitted to Albany Hospital February 22, 1901. Diagnosis, Actinomycosis abdominalis, with inplantation actinomycotic abscess at angle of eye. Treatment, operation and medical.

Family history: Father died of typhoid fever, aet. 74; mother, aet. 98; one sister of enlargement of liver; five brothers and three sisters alive and well.

Previous history: Patient had usual diseases of childhood. Had typhoid fever at fifteen and was quite ill, but recovered completely. No history of any other diseases. Denies venereal disease of any kind. Has drank but little of stimulants. Smokes and chews tobacco rather excessively. Has not been associated much with animals; never worked in grain. General health has always been good. No cough, shortness of breath, bowel or bladder trouble. Never had any serious injuries.

Present illness began November 27, 1900, previous to which time patient had been perfectly well. Trouble began with pain in stomach, while at work, but finished day's duty and then took various remedies without relief. Had sharp cramps, chiefly in lower part of abdomen, very severe, lasting from three to five minutes, and recurring at first every half hour or so. Physician sent for next morning, but patient did not obtain relief from pain for a week. Pain then gradually diminished, but eight weeks elapsed before it entirely disappeared. No chill, fever or vomiting; slight nausea. Pain did not tend to become localized nor to radiate. Seemed to patient it was in bowels. No jaundice. Abdomen never distended, so far as patient knows. Bowels moved regularly; urination was normal. About the first of January, 1901, he was able to be up and around and improved quite rapidly. About the middle of January he went to work superintending an ice gang. Improvement continued, and by February 1st the patient stated he was as well as ever, having regained all the flesh he had lost. February 20th, while still feeling perfectly well, the patient

To Illustrate the Article by Dr. Vander Veer and Dr. Elting, on a "Resume of the Subject of Actinomycosis with Report of a Case of Actinomycosis Abdominalis."

Albany Medical Annals, January, 1902.

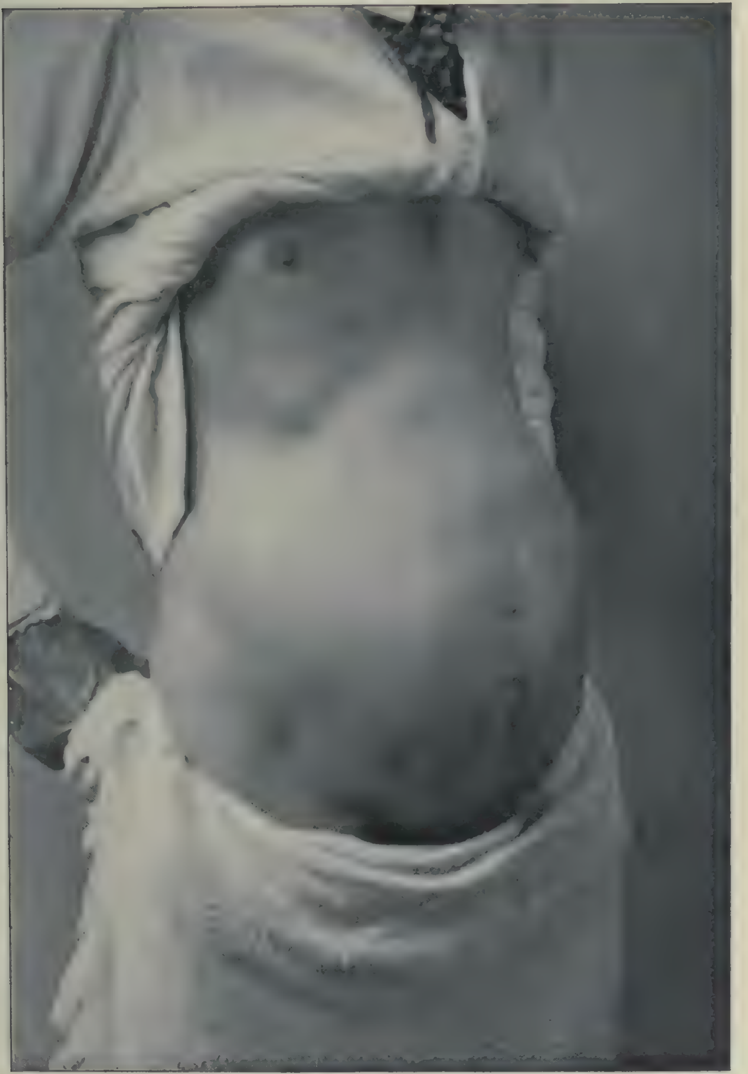

PLATE 4

noticed a small tumor in region of umbilicus, for which, February 22nd, he came to the Albany Hospital, under my care.

Physical examination: There was a distinct tumor mass, size of a fist, in right iliac region, and small tumor, inflammatory in character and evidently containing pus, at umbilicus. Smaller masses could be felt through and in the abdominal wall giving one an impression of sarcoma of the mesentery. Heart and lungs normal; liver dullness extends downward about one finger's breadth below costal margin; spleen and stomach normal. For past five days the skin over tumor has been red with yellow spot in centre. Urine amber, 1030, acid, no albumin, no sugar, sediment slight and a very large number of calcium oxalate crystals present. Blood examination revealed leucocytes 18,500, red corpuscles 4,710,000.

Operation February 28, 1901. Abdominal incision in median line six c. m. long. Upon opening the peritoneal cavity the perital peritoneum was found in various places adherent to coils of small intestine, and a flattened tumor, about the size of half of one's hand, springing from the right iliac crest, other adhesions extending up to the umbilicus. The case was thought to be a multiple sarcoma of the mesentery, yet presented a very different appearance from any similar case I have ever seen. It was now observed that there was a distinct hardening over the portion of the peritoneum, extending to the umbilicus, along the course of the urachus, and round ligament of the liver, with an abscess evidently presenting just under the skin. The latter was not opened for fear of infecting the peritoneum. Incision in peritoneum closed with fine silk, continuous suture; wound then closed with interrupted silkworm gut sutures and iodoform gauze introduced in lower end of incision, standard dressing. Iodoform gauze removed on fourth day and drainage encouraged thereafter, the abscesses of the umbilicus having opened and discharged a creamy, flaky-like substance. Specimens of discharge and tumor were saved, but lost later, not reaching the laboratory for examination. The patient was put upon syrup of hydriotic acid, strychnia and elixir of calisaya, and as good nourishment as possible.

Not feeling at all certain as to my diagnosis, and as to the possibility of actinomycosis, about April 1st, I asked Dr. Elting to look the case carefully over, and to make a thorough examination of the discharge.

His report is as follows:

Patient a large framed, much emaciated man. Skin and mucous membranes pale. Tongue clean. Conjunctivæ clear. Pulse 80 to the minute and regular in rate and rhythm. Wall of artery palpable. Heart normal on percussion and auscultation; lungs normal on percussion and auscultation. Abdomen somewhat distended, fairly uniformly. Costal and iliac grooves obliterated. Respiratory movements present above level of umbilicus. In median line of adbomen midway between umbilicus and symphysis pubis, is a discharging wound five c. m. in length, which appears to be confined to the abdominal wall. Over an area which surrounds the umbilicus, and extends from a point five c. m. to the right of the median line to the left lateral abdominal margin, and on the left from a point four c. m. below the left costal margin to the level of the line joining the anterior superior iliac spine, the abdomen presents a marked board-like hardness over a considerable extent of which the skin is much reddened. This condition appears to be due to an extensive infiltration of the abdominal wall. In the right iliac fossa there is a distinct mass to be felt which extends from a point two c. m. above the line joining the anterior superior iliac crests to the right Poupart's ligament. This mass is very hard but not tender and appears to be connected with the abdominal wall. On deep palpation a projection from the mass appears to extend upward and inward toward the umbilicus. On percussion the note over the mass in the right iliac fossa is decidedly dull, while over the indurated area of the left abdominal wall the note is tympanitic. The liver dullness begins at the sixth rib in mammillary line and extends to the costal margin. Edge is not palpable.

Spleen is not enlarged.

Patella tendon reflexes normal.

Patient has had an irregular septic type of fever since admission to the hospital, varying from 98° to 104° F.

On incision of the abscess in the region of the umbilicus about two ounces of purulent material escaped which contained numerous yellowish-white fine granules, examination of which showed typical actinomyces. In the tissue lining the abscess cavity similar granules were visible. Cover slip stained by Gram's method showed the characteristic fungi. Cultures from several of the abscesses showed so vigorous a growth of the bacillus coli communis that the growth of the actinomyces was obscured.

Patient was administered iodide of potassium in increasing doses, *i. e.*, a saturated solution commencing with three drops before each meal, in a wineglassful of water, increasing three drops each day until sixty drops was reached, and this dose continued.

May 1st. Condition has improved somewhat, although it has been necessary on two occasions to open abscesses in the abdominal wall. The pus evacuated was of a yellowish creamy character and contained less numerous actinomycotic granules than before the administration of the iodide of potassium was begun. There is still a large tumor mass in the lower right quadrant of the abdomen, associated with extensive induration and infiltration of the abdominal wall, which presents four fistulous openings.

June 15th. Patient's general condition is not quite as satisfactory as on previous note. There is still an extensive induration and infiltration of the abdominal wall, which occupies practically the entire anterior wall below the level of the umbilicus, and extends on the left side as far as the costal margin. The tumor in the right iliac fossa is practically unchanged, irregular in outline and of firm consistence. There are three discharging sinuses in the abdominal wall, one at the umbilicus, one in the median line, midway between the umbilicus and the symphysis and one to the left of the median line. The discharge from these sinuses is of a sero-purulent character and contains a moderate number of actinomycotic granules. Appetite good; no gastro-intestinal symptoms. At patient's request he was discharged from the hospital and advised to continue with large doses of iodide of potassium.

June 29th. Patient re-admitted to the hospital for further observation. General condition is somewhat improved, although the abdominal condition does not appear to have changed materially, except that there are more discharging sinuses than at time of last note. The condition at this time is indicated by the accompanying photographs. (Plates 1 and 2.)

The abdominal wall presents a board-like induration which extends on the left side from Poupart's ligament to the left costal margin and as far as the left lateral abdominal margin. The right lower quadrant of the abdomen presents the same board-like induration and the tumor in the right iliac fossa is practically unchanged. The skin over the indurated area is of a bluish-red color and scattered over this area are no less than ten fistulous openings, the discharge from which is of a sero-purulent character and contains a moderate number of actinomycotic granules. Spleen, liver and kidneys are normal. Potassium iodide continued in drachm doses three times a day.

August 20th. Patient returned to-day feeling much better than when seen about three weeks ago. The condition of the abdomen is distinctly improved. Some of the sinuses have closed and the discharge from those remaining is decidedly less than when seen last. The infiltration of the abdominal wall is less extensive and the mass in the right iliac fossa is gradually disappearing. Patient has gained gradually in weight, which to-day is 130 pounds, as compared with 90 pounds, his weight in the early spring. The abdomen is not tender and the discharge of a sero-purulent character and containing but comparatively few granules, which still show the typical actinomyces. The liver is normal, as are the other abdominal viscera, the intestinal tract excepted. Heart and lungs normal. No enlargement of the lymphatic glands. Patient says that about two weeks ago a small pimple or blackhead developed on the right side of the nose, near the inner angle of the right eye. This was squeezed by his wife, who has attended to the abdominal wounds. About forty-eight hours after the pimple was squeezed the patient noticed some pain and swelling about the same. This gradually increased until a tumor the size of a small hen's egg developed, which almost entirely closed the right eye. There was considerable pain and much redness of the skin. Hot applications were employed and about one week after the onset the tumor broke and discharged considerable pus. To-day, situated on the right side of the nose and near the inner angle of the right eye is a tumor the size of a large pigeon's egg, the skin near and around which presents a livid appearance. The centre of the tumor presents a granulating surface, the granulations being œdematous and containing a few yellowish-white granules. The discharge is of a sero-purulent character and contains a few typical actinomycotic granules. Potassium iodide continued in drachm doses three times a day.

September 20th. Patient returns to-day feeling much improved. The actinomycotic abscess at the inner corner of the right eye is entirely healed. The abdominal condition is much improved. It is still possible to demonstrate a few actinomycotic granules in the discharge from the sinuses in the abdominal wall.

October 12th. Patient returns to-day showing still further improvement. He has no pain or discomfort in the abdomen. Bowels are regular; urination normal. Weighs 146 pounds, a gain of 56 pounds since the administration of potassium iodide was begun. Appetite good; sleeps well. Has been doing light work for several weeks past. Color good and general appearance excellent. Heart and lungs are normal. The abdominal wall still presents four or five discharging sinuses situated, for the most part, on the left side. The skin over the lower abdomen is of a bluish-red color and somewhat pigmented. When the patient stands there is some protrusion of the abdomen, as though the muscles of the abdominal wall were weakened, probably as a result of degeneration. The induration of the abdominal wall is much less extensive and is represented by an area to the left of the umbilicus measuring approximately 8 x 10 c. m. The remainder of the abdominal wall is soft and it is no longer possible to detect any tumor mass in the abdominal cavity, nor is there any tenderness on deep palpation. The percussion note over the entire abdomen is tympanitic. From the sinuses there is a small amount of sero-purulent discharge containing an occasional actinomycotic granule, most of those seen being in the early stages of development. Liver dullness not increased, edge not palpable. Spleen not enlarged. No enlargement of lymphatic glands. Rectal examination negative. Condition of patient's abdomen as seen to-day indicated in Plates Nos. 3 and 4.

If this case is studied carefully it is very striking to observe the characteristic conditions that have been described by many authors: the tumors to be felt in the peritoneal cavity, and in the abdominal walls, the peculiar reddish-blue appearance of the surface of the abdomen, the multiple abscesses containing yellowish-like pus and granules;

all these conditions are indicative of actinomycosis, also the patient's improvement for a time after operative intervention and still further improvement when getting under the full effect of the iodide of potassium. The infection of the nose and rapid recovery also aid in confirming the previous diagnosis.

The photographs illustrate very nicely the appearance of the patient when improvement had commenced and still later on when in a condition of convalescence.

TROPICAL DISEASES AS OBSERVED IN THE PHILIPPINES.*

By R. W. ANDREWS, M. D.,

Late First Lieutenant and Assistant Surgeon, 46th Infantry Volunteers.

The prevailing diseases met with were the malarial affections, enteric disorders and certain parasitic diseases.

DENGUE

This is a common epidemic disease in the tropics, and is characterized by paroxysms of fever, and by severe pain in the muscles and joints, and in our cases especially in the back. They could not lie comfortably in any position. From this severe pain in the muscles and joints it takes the name of "break-bone fever," and sometimes, because of the peculiar walk of the patient, due to the pain in his back, it is also called "dandy fever." It is not a fatal disease, but in camps where so many men are affected, it becomes serious, because it weakens the garrison. The patients all told the same story, and to this effect: headache and chilly feelings beginning suddenly, sometimes a distinct chill, and sometimes a chill on the following day in the hospital would lead us to think that we had cases of intermittent malarial fever of the quotidian type, and some of the cases were so diagnosed. Some aching pain, especially in the knees and lumbar region. Fever rose rapidly in some cases and gradually in others, often as high as 106 degrees F. They gave all the other symptoms of acute fever, coated tongue, loss of appetite, etc. Osler and others say there is a rash in this disease, but we did not notice anything which could be called a distinctive rash in any of our cases. They would be quite ill for three or four days, and complain bitterly of the pain, especially in their back, saying they could not sleep because of it. At the end of three or four days they felt entirely well, and would ask to be sent back to their companies. This was generally done, for it was impossible to keep them in the hospital, because in order to do so they would have to be watched continually, and besides that we needed the room. In a few days they would return again complaining of the same symptoms. They would again remain in the hospital for a few days, and then again return to their companies.

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*Read at a meeting of the Dutchess County Medical Society, Vassar Brothers' Hospital, Poughkeepsie, N. Y., April 10, 1901.

The treatment consisted in the administration of three grains each of quinine and acetanilid, in powder, every two hours, and for their pain Dover's powder was administered in five grain doses, and their backs rubbed with alcohol.

DIARRHŒA

This was mostly due to the food eaten. It seemed almost impossible to keep the soldiers from eating all kinds of fruit, ripe or unripe, at any and all times. They complained of gas in the abdomen and pain, and that they had anywhere from five or six to twelve or fourteen or more movements per day, of almost any color you might mention. On observing their motions ourselves we generally found them watery and of a yellowish color. They had no appetite, but wanted to drink quantities of water. We took all these cases into the hospital when possible, restricted their diet to soups, malted milk, etc., and kept them from drinking so much water. We generally adopted a certain plan for these cases, for they were nearly all alike. At first they were given a good sized dose of either castor oil or Epsom salt, and often this would be all the treatment required. In more obstinate cases we gave many things, such as the camphor and opium pill every two or three hours, bismuth subgallate, ten or fifteen grains after each stool, or a prescription containing guaiacol carbonate, three grains, salol three grains and bismuth subnitrate twenty grains, every two hours, or bismuth subnitrate, carbolic acid and peppermint water, or bismuth and Dover's powder. Sometimes we washed out the lower bowel with warm water. They generally did well, and were sent back to duty, some to return in a short time, and some after a week or two. Many of these cases became chronic, and when they did were very resistent to treatment. We then sent them to Bacoor, and often from there they were sent to Corregidor Island, near the mouth of Manila harbor, where a person can get well, if anywhere, in the Philippine Islands.

MALARIA

Malaria received a routine treatment of three grains of quinine every two hours, baths when the temperature was very high, and phenacetine for headache and pain. When the chills ceased they were put on Warburg's tincture in pill form, or kept on quinine and tincture of cinchona compound added. Malaria in tropical countries is serious, they rarely recover entirely, and it does not take long before they are cachectic, and unfit for service. We generally tried to keep up the treatment for at least six weeks after they left the hospital. This was well nigh impossible, for if you gave them medicine to take with them, perhaps they would take it, perhaps not, surely they would not return to the hospital for more when needed. We therefore adopted the plan of placing their names on a list, and requiring them to report at certain hours each day at the hospital for their medicine. This did not work well. Most of them came faithfully when in the garrison, but they were often away guarding wagon trains, escorting parties here and there, guarding line men repairing telegraph wires, etc., and so they eventually came back into the hospital again.

This disease, with the exception of perhaps the severe bilious remittent form, the pernicious form, and the cachexia you are more or less familiar with. There were many cases at Indan, and almost all of the quotidian type. I don't think I saw a case of the tertian type, the common form in the United States, during my stay. I saw two cases of pernicious fever, one of which succumbed. The cachectic form developed very rapidly and soon rendered the soldier unfit for service. Many of these men were sent home to this country. There was an abatement of malaria during the dry season. We treated the quotidian form with quinine, giving usually a three grain pill every two hours, sometimes as high as thirty or forty grains per day, often in solution and with iron and arsenic. These cases would get about and do duty for a time, but generally they came back when the cachexia had fairly developed. The treatment of the pernicious cases consisted of the hypodermatic injection of quinine hydrochlorate in five grain dose into the buttock hourly after the first paroxysm with the idea of trying to prevent a second. The bilious remittent cases was treated with quinine in solution with arsenic and iron, and the malarial cachexias with Warburg's tincture and iron, fifteen minims of the latter after each meal, and one or two pills of Warburg's tincture four times daily.

MEASLES

An epidemic of measles occurred, mostly in one company. The entire company was quarantined and those who already had the disease were treated in the isolated ward. There was quite a number of cases, but the men were only inconvenienced for a few days and then it was hard work to keep them penned up until after desquamation had ceased.

DHOBIE ITCH.

No matter what kind of an eruption it was, or what caused it, it was invariably called by the soldiers, dhobie itch. Dhobie itch is the name given to this skin lesion by residents of India, for they claim that the disease is caused by the dhobie man or washerman. It is our tinea circinata or ring worm, and was very prevalent among the soldiers. It kept many from doing duty, often occurring on the feet and legs, preventing the wearing of a shoe or leggin. It often caused ulcers. Another favorite location for it to appear was in the crotch, tinea cruris, the chafing rendering them unfit for marching. I had two cases literally covered from head to foot with ringworm. While this disease did not make the men sick, yet it was very unpleasant, and when there were so many cases, it gave considerable trouble. It is contagious, and all clothing used by these patients had to be disinfected. The treatment consisted in applying a variety of things, amongst them copper sulphate solution, sodium hyposulphite solution, a solution of chrysarobin in alcohol and collodion. Turpentine was also used, but what seemed to have the best effect was to first scrub the part with soap and warm water, and then apply tincture of iodine for several times, usually applying it once a day at sick call, and later dusting the parts with boracic acid and talcum. Dhobie itch often caused ulcers, and these in turn when situated on the feet or legs, often caused femoral abscesses and buboes. It was remarkable how a slight sore would cause an abscess. I had one case which simulated somewhat bubonic plague, and as there were several cases of this disease in Manila at the time, it gave us some uneasinesss. The abscesses were opened and drained and gave no further trouble.

Ascaris Lumbricoides

This was another prevalent disorder. At one time I had twenty-six men under treatment, who had either vomited or passed from their bowel the ascaris. They would come to the hospital frightened to death with the worm in a bottle, or on a chip. The mode of infection is due to their manner of disposal of night soil, which is used by them as fertilizer. The ova of the ascaris get in the water, or are in some manner unintentionally swallowed. The ova then mature. They rarely give rise to any symptoms, and the first the patient may know of their presence is when one crawls up into the mouth or nostril, causes nausea and is vomited or is noticed in their stools. Treatment consisted in giving two or three grain doses of santonin two or three hours apart on an empty stomach, followed by a purgative, usually Epsom salt, or to give this dose on three successive nights, and then follow with a purgative.

(*To be Concluded.*)

TENDON TRANSPLANTATION FOR THE RELIEF OF PARALYTIC TALIPES.*

By M. D. DICKINSON, M. D.,
Troy, N. Y.
Orthopedic Surgeon, Troy Hospital; Physician and Surgeon, St. Vincent's Orphan Asylum; Surgeon, St. Joseph's Infants' Home.

Paralytic talipes represents nearly all the acquired deformities about the ankle; and in a large percentage of the cases the paralysis is of spinal origin. These cases have been considered grave by the profession, and perfect cures have never been expected. For a long time even the specialists have contented themselves by simply preventing deformity, if they were fortunate enough to see the case early; and in the remaining cases, the removal of the deformity has been but a part of the treatment, as the patients have been obliged to wear some kind of a support to prevent a relapse. In tendon transplantation we have something more favorable to offer, for we not only overcome the deformity, but also cure the functional disability. A brilliant future for this operation seems assured from the many satisfactory results already reported.

The operation, as the name implies, consists of attaching the tendons of living to that of paralyzed muscle. The first operation was performed by Nicoladoni, in 1882, but the first attempt in this country was made by Parish, of New York, in 1890. Notwithstanding that the early operations were as satisfactory as anticipated, there were very few operations performed, until within the past three or four years; still it is the plan of treatment by selection in the most prominent orthopedic clinics. It is essential to have an exact knowledge of the function and strength of each muscle about the ankle joint, as well as the movements of the foot, in order to understand the principles of tendon grafting. There are four movements of the foot: dorsal flexion, plantar flexion, adduction and abduction. The two flexions are carried on at the ankle joint, and consist of moving the foot forward and backward, only one articulation taking part in the movement. Adduction, the motion of turning the foot inwards, is accomplished by all of the tarsal articulations, especially the astragalo-os-calcis. Abduction, the motion of turning the foot outwards, is carried on by the same articulations as adduction in the reverse direction. These four movements are controlled by one or more principal muscles with one or more auxiliaries. The direct dorsal flexors are the tibialis anticus and peroneus tertius, assisted by the extensor longus digitorum and the extensor proprius hallucis. The direct plantar flexors are, the soleus and gastrocnemius, assisted by the flexor longus hallucis, flexor longus digitorum, tibialis posticus, peroneus longus and brevis. The direct adductors are, the tibialis posticus and anticus, assisted by the flexor longus digitorum, flexor longus hallucis, and extensor proprius hallucis. The direct abductors are, the peroneus longus and brevis, assisted by the peroneus tertius and extensor longus digitorum. The most natural position of the foot is at a right angle with the leg, and it will remain practically in that position unless influenced by some force, such as the functional use of any of the muscles or some outside power. But if one group of muscles is paralyzed the unbalanced distribution of power will cause a deformity, by the contraction of the unaffected group. A final prediction of the deformity from any paralysis can be given from a knowledge of the function of the muscles affected. For example, paralysis of the tibialis anticus will cause an equinus, by the contraction of the calf muscles; and if on the one hand the tibialis posticus is added to the group, there will be an equino-valgus, from the action of the calf muscles and the peroneus group; whilst on the other hand if the peroneus group is added to the dorsal flexors, there will be an equino-varus, from a combined action of the adductors and the calf muscles. If there is a paralysis of the soleus and gastrocnemius, a calcaneus deformity will result, from the action of the dorsal flexors; and if either the adductors or the abductors are added to the paralyzed group, there will be a calcaneo-valgus or calcaneo-varus, as the case may be.

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*Read at a meeting of the Medical Association of Troy and Vicinity, December 3, 1901.

The foot has many simple movements which can be sacrificed to maintain the important ones. For example, either flexion or extension of the toes is of little importance when compared with adduction, abduction, dorsal or plantar flexion; and tendon grafting was first suggested, for the purpose of distributing to a better advantage the power remaining in an affected foot.

In selecting a tendon for grafting, it is better to choose one of the same group, or at least a muscle having similar action if possible; but if all the muscles of a group are paralyzed, you can transplant one of antagonistic function. For example, in paralysis of the tibialis anticus, one may graft the extensor proprius hallucis, the extensor longus digitorum; or perhaps a more efficient plan is to make them all direct dorsal flexors, as the power of both digital extensors is not equal to the tibialis anticus. In paralysis of the gastrocnemius and soleus, one may graft the peroneus longus (the first operation performed), the flexor longus digitorum, or the flexor longus hallucis. In paralysis of the peroneus group, it is possible to graft the extensor longus digitorum, or bring over half of the tendon of the tibialis anticus, thereby reducing the power of the adductors, which are causing the deformity. In paralysis of the tibialis posticus, one can graft the peroneus langus or the extensor proprius hallucis. In the paralysis of these four muscles separately we have had several muscles of the same function to transplant; but unfortunately the permanent paralysis following a poliomyelitis is not always confined to a single muscle, for often you will have a whole group of muscles paralyzed. To illustrate, if all the dorsal flexors are paralyzed, we will be obliged to transplant a plantar flexor, for example, the peroneus longus, flexor longus hallucis, or the posterior tibial. The same rule will follow if all the plantar flexors are paralyzed, here we may graft the extensor proprius hallucis, a dorsal flexor. If the peroneus group have escaped, which is often the case, it would be well to graft the extensor proprius hallucis and peroneus longus into the tendo Achillis, and the peroneus brevis in the posterior tibial or the flexor longus hallucis. Every variety of combination has been employed, and in fact it is impossible to formulate absolute rules; but the transplantations suggested appear to be the most reasonable. Each case, however, must be figured out for itself; first, one should find out how much paralysis exists; secondly, how much muscular strength remains, then distribute the power so as to balance the foot if possible.

In the study of the movements of the foot, remember that they are mechanical; and that when a muscle contracts it has performed its physiological act; and it makes no difference to the muscle whether its tendon is so attached as to produce adduction, abduction, dorsal or plantar flexion. If the muscle transplanted has performed a similar movement, or perhaps assisted in, the same movement, the brain needs little or no training to perform the desired motion; but if a plantar flexor is asked to do a dorsal flexor's work, it is necessary to educate the nervous system to the new conditions.

The extent of the paralysis in all cases governs the prognosis. It is evident it will be most effective when but one muscle is paralyzed, but recovery from all the disability is not necessary to justify the operation. It is only too evident, that it would be impossible for one of the peroneus group to perform the work of the calf muscles; still they are ample in strength to keep the foot from assuming the calcaneus deformity, and thereby a great benefit to the patient.

In performing the operation, strict asepsis should be observed; the leg, ankle and foot should be shaved, thoroughly cleansed with green soap and bi-chloride solution. A long incision should be made, exposing both tendon and muscle substance. The tendon which is paralyzed will be dull white, while the one to be grafted will be silvery white. One incision is sufficient to expose both tendons, unless they are some distance apart. The paralyzed muscle is always shortened, either by cutting and overlapping, or by folding. In the transplantation of the tendons both should be scarified, the graft should pierce the paralyzed tendon, and the scarified surfaces should be brought together in stitching. Silk, kangaroo-tendon, or chromicized catgut are good ligatures to attach the tendons, while catgut or silkworm-gut are indicated to close the external wound. The foot should be held in normal position while the tendons are being attached, but it should be dressed in an overcorrected position. After the operation is finished, a plaster of Paris dressing should be applied and left for several weeks. The foot then should be supported by a brace until it is evident that the union of the parts is firm, and the functional result is assured.

Editorial

> "The Queen answered hastily, and without affecting to disguise her satisfaction, 'By my word, I am glad he is better. But thou wert over bold to deny the access of my Doctor Masters. Know'st thou not the Holy writ saith, "In the multitude of counsel there is safety."?'
>
> "'Ay, Madam,' said Walter, 'but I have heard learned men say that the safety spoken of is for the physicians, not for the patient.'"
>
> *Kenilworth.*

Emergency Hospitals for the Insane

The opening of the new pavilion at the Albany Hospital for emergency mental cases marks a distinct advance in hospital administration and in the treatment of the insane. This tardy recognition of the moral obligation to insane patients by the general hospital is the final step in the demonstration of the pathological origin of their alienation. The work of the last generation in institutions for the insane has been the elaboration of medical methods, and to their success may be ascribed this departure, which completes a system of care and provides for every phase of these most perplexing and disastrous manifestations of disease. From this additional resource there arises no conflict between institutions, but the functions of the general hospital, on one hand, and of the special hospital, on the other, are mutually interchangeable and co-operative.

To the medical and surgical staff of the Albany Hospital, who advocated this pavilion, and to the officials of Albany county, who granted the appropriation for its construction, the honor of priority is due.

The Albany plan has attracted wide-spread attention, and since its publication a general effort has been made in the large cities to make similar provision. The State of Michigan has recently made a liberal appropriation for a psychopathic department in connection with the University Hospital at Ann Arbor. At a conference of the officers of the Ohio State hospitals, held in Toledo on June 27th, a strong plea was made by Dr. E. G. Carpenter of the Columbus State Hospital for the erection in each of the large cities of a "hospital where persons afflicted with mental derangement can be cared for until adjudged insane." The subject was also revived at the annual meeting of the American Medico-Psychological Association in Milwaukee in June, by Dr. Henry C. Baldwin, of Boston, who presented a paper entitled "The Need of Better Provision for the Proper Care of Cases of Delirium Tremens and Cases of Doubtful Mental Disease." (*Medical Record, September 7, 1901*). Dr. Baldwin advocated the Albany idea of a ward or pavilion in connection with the city hospital.

In his masterly address before the Rhode Island Medical Society (*Providence Medical Journal, July, 1901*) upon "The Yesterday and To-Day of Mental Medicine," Dr. G. Alder Blumer refers to the position recently taken by the general hospital in the establishment of out-patient departments for mental cases and of "psychopathic" wards. The highest sentiment will be expressed by the absence of any special designation when the insane patient without other reason than "sickness" is received on the common basis of all admissions. That the City of Albany has been the first to attain the ideal, which in the language of Dr. Blumer, "bespeaks the pace of to-day and the response of the public to the modern exigency," should be a source of pride to all who have participated in the elevation of the new hospital to the highest requirements of science.

Scientific Review

GLAUCOMA

Dr. G. E. de Schweinitz, of Philadelphia, read an article before the American Ophthalmological Society at its session in July, 1901, concerning the Treatment of the Apparently Unaffected or, at most, but Slightly Involved Eye, in Cases of Glaucoma.[1] He said that the main purpose of the paper was to evoke discussion. Among his hearers were some of the most famous ophthalmologists living. Dr. Charles Steadman Bull, of New York, was to have read, at that session, a paper on glaucoma, but illness in his family had kept him from preparing it. His discussion of the article first mentioned, above, heartily indorsed its conclusions. One main decision was that iridectomy, performed as soon as possible after the existence of glaucoma was recognized, is the most promising kind of treatment. Discussion abounded. Dr. Knapp, of New York, was the only famous surgeon present who took no part in it. That evening he asked Dr. de Schweinitz: "Why bring up so trite a subject? Each one came hither with his own opinions of it and will go away with the same ones!" Dr. Pooley, of New York, said that he knew of nothing favorable that could safely and truthfully be promised to a patient, with simple glaucoma, as the result of an iridectomy; that, consequently, he disliked to advise the performance of that operation, in such cases.

Glaucoma was considered incurable until, in 1856, Von Graefe discovered the curative action of iridectomy.[2] Von Graefe however, even after his announcement of the efficacy of the treatment of inflammatory glaucoma, by iridectomy, did not class simple glaucoma as a kind of glaucoma, but as amaurosis with excavation of the optic nerve[3]. Fuchs, of Vienna, writes that "Views differ as to the efficacy of iridectomy in glaucoma simplex."[4] In 1881, Mr. Power, of London, said that: "In cases of chronic glaucoma no operation is of much service."[5] In 1883, Dr. Heyl, of Philadelphia, read, before the American Ophthalmological Society, an article entitled: "A Contribution to the Operative Treatment of Glaucoma." It begins thus: "Not a more brilliant example of the value of the empirical treatment of disease is on record than the history of the application of the iridectomy to the treatment of glaucoma. Originating in what was doubtless a false interpretation of a keen clinical observation, applied to a disease which even to-day is an unsolved problem, acting in a way which Von Graefe himself could not explain, and which as yet lacks satisfactory explanation, it nevertheless, after twenty years of service, is the main resource in glaucoma. Of course, an operation with such a record must have substantial merit; by this, however, is not meant that the status of the glaucoma iridectomy, as a remedial measure, is fixed; this can never be until we understand the rationale of its action and the nature of the disease against which it is used. The practical consequence must be that cases present themselves for treatment where the iridectomy is performed, not because we are persuaded that it is the best *possible* procedure for the patient, but because we know of nothing better."[6] The chairman of the section on ophthalmology of the International Medical Congress, that met in Washington in 1887, was Dr. Chisolm, of Baltimore. A part of the first sentence of his opening address was: "* * * * * the origin and nature of glaucoma are not clearly defined."[7] The selection of this as the only specified deficiency of ophthalmic science and the setting it over against the imperfections of operations, seemed a fit index of the real status of glaucoma.

In 1889, Dr. Gruening, of New York, wrote: "In chronic glaucoma with degenerative changes, neither iridectomy nor anterior sclerotomy will give the patient the desired relief; posterior sclerotomy may do it at times."[8] Dr. Charles Steadman Bull, of New York, read, in 1889, a paper before the American Ophthalmological Society, concerning ninety glaucomatous persons who had been his patients. Dr. Leartus Connor, of Detroit, in 1896, says about the conclusion of Dr. Bull's article: "Of the one-hundred and eighty eyes, only ten eyes were at all improved by the iridectomy, and these grew steadily worse. * * * * * It is thus clear that in chronic, simple glaucoma, iridectomy is far from a brilliant success."[9] As to the therapy of simple glaucoma, Dr. Edward Jackson, then of Philadelphia, now of Denver, wrote in 1890: "* * * * * it is but slightly amenable to treatment."[10] Some of the ablest investigation of the nature and treatment of glaucoma has been by Dr. Richey, of Washington. In 1892, he read a paper before the American Ophthalmological Society, maintaining that the prime, etiological factor of glaucoma is constitutional."[11] Before the American Congress of Physicians and Surgeons, in 1897, he read a paper on "Gout and Rheumatism in the Etiology of Glaucoma."[12] In the former (1892) article are compared, in parallel columns, inflammatory glaucoma and acute gout of the great toe, with reference to heredity, age of patient, premonitory symptoms and a dozen other points of similarity. As to the etiology of glaucoma, there are four chief theories: that of Von Graefe, that of Donders, that of Stellwag and that of Knies and Weber. Fuchs says: "Even these theories are not free from objection."[13] In his text-book, published in 1894, Dr. Noyes, of New York, wrote: "* * * * * if the full group of symptoms, increased tension, reduced sight, restricted nasal field, excavation, arterial pulsation, etc., is not present, we must simply await developments and teach the patient to observe his symptoms, *i. e.*, halos and attacks of dimness. An iridectomy must not be done without decided indications."[14] In a letter dated July 14, 1897, Dr. S. O. Richey wrote: "* * * * * a man who would *understand* glaucoma, *must* understand gout; the more he knows of gout, the clearer will be his conceptions of the phases of glaucoma. * * * * * Up to 1884, glaucoma was to me the most terrible and threatening affection which I had to consider. Now it is the exceptional case, acute or chronic, upon which I operate. Never in the simple form, rarely in acute attacks, because I get better results by managing them as described in my paper, 'Transactions of the American Ophthalmological Society, 1896.' *Taxis* gives wonderful results in my hands. I have never yet *seen* the case of glaucoma in which I could not reduce the tension. It must be repeated *pro re nata;* sometimes three or four times a day, in an acute attack. Any tendency to intra-ocular hæmorrhage necessitates caution. * * * * * I have little dread of these cases, now, except when the malady is suddenly declared after operation; if I see them in time; that is, before vision is abolished, though even then it may be recovered; or before thrombosis of the choroidal veins is permanently established, for *taxis* will empty them, *establish the circulation* and reduce tension." In a personal communication, Dr. Landolt, of Paris, France, wrote: "As for glaucoma, it seems to me that nobody knows anything about it, unless it be that either iridectomies or sclerotomies, or both successively, are to be done; then myotics are to be given and then all that has been mentioned is of scarcely any use." Because literal translations are oftener misleading than otherwise, the foregoing is a free one. In order that the reader may himself judge of Landolt's opinion, his words follow: *"Quant au glaucome, il me semble que personne ne sait rien sinon qu'il faut faire des iridectomies ou des sclérotomies ou toutes les deux successivement plus donne" des myotiques et que tout cela ne sert à peu près à rien."*

Anyone who is at all acquainted with the subject is aware of the importance of the correlation of the different kinds of glaucoma. In 1895, Dr. Lippincott, of Pittsburgh, read a paper before the American Ophthalmological Society, which ends thus: "* * * * * the case just related has some interest, as tending, so far as it goes, to establish the modern idea of the intimacy of the relationship existing between simple and inflammatory glaucoma."[15] As emphasizing the lack of knowledge of the real nature of the disease under consideration, concerning which the ideas of Chisolm, Heyl and Landolt have been above cited, Dr. Noyes' saying may help: it was to the effect that the malady has sixteen symptoms, all of which may be absent, though the disease is present. Dr. Leartus Connor wrote, in '96: "Von Graefe first proved that iridectomy would cure some attacks of glaucoma, a discovery of inestimable value. Added experience has shown that an iridectomy will not cure all attacks of glaucoma, or all stages of any one attack."[9] If a reviewer may express an opinion, mine, of the etiology of glaucoma, coincides with that of Dr. Richey. He has long and persistently maintained that glaucoma is due to "dirty" blood. Dr. Connor, in the article already cited, says: "My own experience supports the claim of Dr. Sutphen, that salicylate of soda often relieves the severer pain of glaucoma, and accords with the fundamental idea of this paper, that the foundation of glaucoma is a constitutional dyscrasia, which should be sought out in every case and removed so far as possible. * * * * * the diet should be so regulated as to admit only such articles, and in such quantities, as can be perfectly digested. The liberal use of water, internally and externally, greatly assists in restoring the fluids of the body to a state of reasonable purity. The continuance of such diet affords the largest hope of preventing future glaucomatous attacks."[9] In summarizing the subject of which this writing is an attempt to review, one might easily be guilty of the fallacy of the undistributed middle. Other blood than gouty is "dirty." "The liberal use of water, internally and externally, greatly assists" in other maladies than gout. Yet the thesis of Dr. Richey, that gout is the prime cause of glaucoma, seems as defensible as any that has been offered. Dr. Osler, of Baltimore, discussing mineral waters in the treatment of gout, writes: "All forms may be said to be beneficial in gout, as the main element is the water, and the ingredients are indifferent."[15]

As a cure for glaucoma, iridectomy seems to lead the class; which is, after all, but faint praise, since its rivals have little, if anything, better than a sustaining mark. Before the Ninth International Ophthalmological Congress, Utrecht, 1899, Dr. Kern stated his belief that iridectomy is indicated in every case of

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, OCTOBER, 1901

Deaths

Consumption	22	Albany City Hospital	14
Diphtheria	6	St. Peter's Hospital	6
Cholera Infantum	1	Homeopathic	1
Erysipelas	1	County House	5
Influenza	1	St. Margarets House	6
Pneumonia	6	Little Sisters of the Poor	4
Broncho-Pneumonia	1	Home of the Aged	1
Apoplexy	9	Albany Orphan Assylum	1
Bright's disease	9	Sacred Heart	1
Cancer	8	Total deaths	126
Accidents and violence	11		
70 years and over	27	Rate	14.25
1 year or under	16		
Births	73	*Marriages*	12

In the case of the six deaths from diphtheria, antitoxin was not used in one; was used a few hours before death in three, the physician having been called late in the disease; and two to four days in the remaining two cases, each having progressed for a week before use.

The death rate for Albany from November 1, 1900, to November 1, 1901, was 17.59. The death rate for the same period, less non-residents, was 16.14. This is the lowest death rate in years.

ABSTRACT OF VITAL STATISTICS, NOVEMBER, 1901

Deaths

Consumption	13	St. Peter's Hospital	3
Diphtheria	9	Homeopathic	2
Pneumonia	9	County House	3
Apoplexy	10	Little Sisters of the Poor	2
Bright's disease	14	Hospital for Incurables	1
Cancer	8	House of the Good Shepherd	1
Accidents and violence	6	Albany Orphan Asylum	2
70 years and over	37	Total deaths	124
1 year or under	12		
Albany City Hospital	8	Death rate November, 1901	13.46
Births	70	*Marriages*	56

ABSTRACT OF THE REPORT OF THE HEALTH OFFICER OF THE CITY OF ALBANY, N. Y., FOR THE YEAR ENDING OCTOBER 31, 1901

The death rate for the year was 17.59 for all deaths, and 16.14 for residents only. For the year 1900 the death rate was 19; for the year 1899 the death rate was 20; for the year 1898, 22. This is the lowest death rate for the City of Albany on record. A number of factors have contributed to this low death rate. The decrease in the number of deaths from typhoid fever, following the opening of the filtration plant; the decrease in the number of deaths from diphtheria, owing to the increasing use of antitoxine; the absence of scarlet fever from the city and, with the exception of the deaths from influenza in January, a very small death rate from contagious and communicable diseases have been the principal factors contributing to that end.

The city has been unfortunate enough to have a large number of cases of smallpox during the year. The disease made its appearance about the end of last November, reached its height in April and disappeared in August. At the public schools, in which the compulsory vaccination law is strictly enforced, there was but one case. In other schools, which did not require vaccination, there were a large number of cases, while in the Lathrop Memorial Home, which had, with one or two exceptions, no protection from vaccination, the entire institution became infected. Sixty per cent. of all the cases of smallpox had never had the benefit of protective vaccination and twenty-six per cent. had been vaccinated only once in infancy.

The Bertillion system of classifying deaths has been introduced in the office, and at the end of another decade valuable comparative statistics for the City of Albany ought to be obtained therefrom. Complete record books also of the deaths in institutions, the burials in cemeteries, contagious diseases reported, the results of the use of antitoxin, the work at the Bender Laboratory, the removal of dead animals, the market and meat inspections and the plumbing inspections are now provided for.

The Health Officer again recommends some public means of caring for cases of contagious disease in an institution adapted for that purpose.

VITAL STATISTICS

Number of births	1,363
Number of marriages	535
Number of deaths	1,759
Number of deaths in public institutions	369
Non-residents dying in public institutions	145

CONTAGIOUS DISEASES

Number of typhoid cases reported	143
Number of scarlet fever cases reported	110
Number of diphtheria cases reported in institutions	158
Number of diphtheria cases reported in the city	419

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CONTAGIOUS DISEASES

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Number of scarlet fever cases reported	110
Number of diphtheria cases reported in institutions	158
Number of diphtheria cases reported in the city	419

Number of chicken-pox cases reported	134
Number of whooping-cough cases reported	6
Number of phthisis cases reported	31

The deaths from contagious diseases:

Diphtheria and croup	43
Typhoid	24
Scarlet fever	8
Phthisis	233

Diphtheria tests at Bender Laboratory:

Total number of tests	1,472
1st., Cultures Dip	317
1st., Cultures Not	596
Final, Cultures Dip	262
Final, Cultures Not	245
Spoiled tubes	52

The number of phthisis cases reported has increased, and it is greatly to be desired that as many of these cases as possible should be on record in the Department of Health. At the Bender Laboratory, the proportion in first cultures of two non-diphtheria to one diphtheria is maintained this year and is the same as during the previous year. The use of the laboratory for the diagnosis of this disease and for the final culture is practically universal throughout the city. The number of antitoxin units furnished to physicians was 45,000. The return postal cards for the release of quarantine for diphtheria and scarlet fever have been accepted by the profession and are giving very general satisfaction.

A great many cases of typhoid fever occurring in Albany through the last year were imported cases and many "vacation" typhoids developed in the city during the month of September.

Albany is at the present writing free from scarlet fever.

Coincident with an increase in the number of cases of diphtheria throughout the country, Albany has had a corresponding increase since the opening of the public schools in September. The disease is now under control.

On account of the interest aroused by the presence of smallpox in the city, a separate section is devoted to this subject. The total number of cases in Lathrop Memorial Home was thirty-nine, consisting of twenty-four boys and fifteen girls, and the only inmate in the institution who escaped the disease was a girl who had been vaccinated some years previously. None of the children had ever been vaccinated. The first case found in the institution was one of supposed chicken-pox, and appeared about March 17, 1901. It was not until April 16th that the attention of the health authorities was called and police quarantine instituted. The quarantine was raised on May 7th, and was maintained for a period of thirty-one days. The source of the infection in this institution has not been ascertained and no one outside of the institution contracted the disease.

The total number of cases outside of the Lathrop Memorial Home was seventy-four, which together with the Lathrop Memorial Home cases, thirty-nine, made a total of 113. The entire expense to the city for conducting these cases was something less than $3,000, and outside of the regular office force, one special inspector and a cook at the Smallpox Hospital were the only extra persons employed. There were no deaths from the disease and no complications except two of conjunctivitis and one of iritis. The disease first made its appearance on November 27, 1900, and was supposed to have been brought into the city by a traveling minstrel troupe.

The disease in Albany exhibited the same mild type as noticed in other places. As a rule, all the cases were well advanced to the pustular stage before identified or reported, or even before a physician had been called. In consequence, certain well members of the family seem to have been infected before the vaccination, which was always promptly done on the discovery of the disease. On the other hand, all the employees of the Health Office were freely exposed to the disease. Previous to such exposure each had been recently vaccinated at least three times, some as many as seven times. None took the disease. In two cases there was an absence of quarantine throughout the entire course of the disease. Both of these cases were mild cases and walked the streets undiscovered, and would have remained unknown had it not been for other cases which they had infected. With the exception of these two all the other cases were quarantined, and all were quarantined by the police with the exception of three. The experience of the department in connection with these three was such as to render it inadvisible in future to quarantine smallpox cases otherwise than by the police. While in these three cases every public interest was safeguarded, still the absence of the police aroused so much fear in the surrounding neighborhood that in future police quarantine seems to be an essential in this disease. Forty-four separate premises were quarantined by the police. By far the greatest number of cases, twenty-nine in number, came directly or indirectly through one of the schools in the city which had become pretty thoroughly infected before the disease was recognized. The children in this school were generally not protected by vaccination. In but one instance did any member of the public schools, where compulsory vaccination is required, contract the disease. The study of this disease from the standpoint of protective vaccination is most interesting. Of the seventy-four cases in the city at large forty-six had never been vaccinated and twenty-eight others had been vaccinated only once in childhood. Of these twenty-eight, however, only twenty-four showed a satisfactory scar, but out of the entire number there had been but nine revaccinations. In sixty-eight cases there had not been a recent protective vaccination except at the time the disease was discovered, and then apparently too late to prevent the contagion.

So much opposition to vaccination developed in certain quarters, in consequence of which the department became seriously hampered in its efforts to stamp out the disease, that the Department of Health requested such members of the medical profession, as desired to do so, to certify as to their belief in the efficacy of vaccination. The cards were returned with the greatest promptness, and out of 107 cards sent, ninety-one were returned almost immediately. Several to whom cards were sent were out of the city, but were known to be favorably disposed toward vaccination. The publication of this strong statement, signed by almost the entire profession of the city, irrespective of schools, assisted the department materially in overcoming prejudice.

It was of interest to the department to know about how many vaccinations had been made in the city during this period. Out of the ninety-nine postal cards sent requesting returns as to the number of cases vaccinated, forty-eight doctors made replies, and stated that the total number of vaccinations made by them was 4,531. The department made approximately 8,000, so it is fair to say something like 15,000 vaccinations were made. There were no unfavorable results in any of the cases vaccinated by the department, and none vaccinated by the profession so far as the department has information. Twenty-four of the cases of smallpox were treated in the Smallpox Hospital and in addition, eight relatives were taken there as a preventive measure and also to care for the sick.

Other facts in regard to smallpox are given in detail in the report.

A great many things have been said about the Smallpox Hospital, unfortunately called by some, "the pest house." Up to the present time, no serious complaint has been made by anyone who has been taken to the hospital or the treatment received there. Everyone was treated with the utmost kindness and consideration and the keeper of the hospital, together with the others employed there, did everything possible to mitigate all disagreeable features of the disease.

Smallpox in the United States

The Surgeon-General reports that during the year smallpox has occurred in every state and territory of the Union with the exception of Arizona, from which no reports have been received. The number of cases reported for the six months ended December 30, 1900, was 7,796, with 137 deaths, a mortality of 1.75 per cent.

For the six months ended January 30, 1901, 30,710 cases were reported with 552 deaths, a mortality of 1.79 per cent. For the whole year the number of cases was 38,506 and deaths 689, showing a mortality of 1.79 per cent.

During the year ended June 30, 1900, there were 15,053 cases reported with 735 deaths, a mortality of 4.8 per cent. It is believed that the cases reported this year, as well as the deaths, were more in accordance with the exact figures with those during the preceding year, and the percentage of deaths of 1.79 per cent. is deemed to be the correct mortality.

The Epidemic of Tetanus at Camden, N. J.

The following report of the committee appointed to investigate this epidemic has been published:

We have thoroughly investigated the cases of tetanus occurring in

Camden, and beg to present to the public the following facts and conclusions:

1. Samples of all the different makes of vaccine employed in Camden have been tested for tetanus germs by the State Bacteriologist of New Jersey, and have been found pure and entirely free from tetanus germs; hence, tetanus could not have been caused by the virus employed. (See report of Dr. Mitchell, secretary of New Jersey State Board of Health.)

2. The history of each case of tetanus has been carefully collected from the attending physician, and in every instance vaccination was practiced in a correct and cleanly manner; the infection of tetanus resulting from neglect on the part of the patients to present themselves to the attending physicians, so that their vaccination could receive proper attention.

3. One case of tetanus has occurred from gunshot wound, during the same period, in a boy who had not been vaccinated, proving that the tetanus germs were in the atmosphere.

4. Indisputable evidence of the fact that the tetanus germs were not introduced at the time of vaccination is that acute tetanus occurs in from 5 to 9 days after the introduction of the germs, whereas in every case acute tetanus occurred in from three to four weeks after the vaccination. If the virus had been contaminated, tetanus would have ensued within nine days after vaccination. Tetanus developed in every make of vaccine used.

5. Further proof of the purity of the virus exists in the reports of the physicians in Cooper Hospital, who tested on animals samples of all makes of vaccine employed in Camden. If the virus had been contaminated, the animals would have developed tetanus because of their extreme susceptibility to this disease. (See animal experiments.)

6. During the past five weeks there have been vaccinated in Philadelphia a very large number of people with the same virus as employed in Camden. In not one of these cases did tetanus occur.

7. The tetanus cases in Camden are to be explained upon atmospheric and telluric conditions which have prevailed in Camden during the past six weeks. There has been a long period of dry weather with high winds, so that tetanus germs, which have their normal habitat in the earth dust, dirt of stables, etc., have been constantly distributed in the atmosphere. It is noticeable in all the cases, after careful examination as to the cause, that the wound had been exposed by the scab being knocked off or removed, or else the arm had been injured and infection resulted; frequently children scratched the vaccinated area with their dirty fingers and nails and infected the wound.

8. That vaccination should be regarded as a surgical operation and should be performed in an aseptic or clean manner, and in every instance the physician should be consulted for advice if any unusual inflammation should develop.

9. It is the unanimous opinion of the board of health, as well as of their committee of experts, that, inasmuch as vaccination is harmless, it should be insisted upon by physicians as an absolutely necessary procedure for the

prevention of smallpox. Tetanus, or any other infection, can never occur if the vaccination is properly protected from contact with the atmosphere or with soiled clothing, bandages, etc.

HENRY H. DAVIS, *President.*
JOEL W. FITHIAN, M. D.
S. G. BUSHEY,
Committee Board of Health.

CAMDEN, N. J., November 29, 1901.

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held December 11, 1901, in Alumni Hall. The meeting was called to order at 8:45 P. M., the President, Dr. William H. Murray, in the chair. The following members were present: Drs. Bailey, Ball, Blair, Blumer, Carroll, Case, Cook, Curtis, Dawes, Elting, W. H. George, Happle, Hinman, Jenkins, Lipes, Lomax, MacFarlane, C. H. Moore, Mosher, Munson, Murray, Neuman, Sabin, Sautter, Shaw, J. E. Smith, Streeter, Theisen, Thompson, Trego, A. Vander Veer, E. A. Vander Veer, Wiltse.

1. *Reading of the minutes of the last meeting.*

Dr. BLUMER moved that the minutes as printed in the ALBANY MEDICAL ANNALS be adopted. The motion was seconded and carried.

2. *Minutes of special meetings.* There were none.
3. *Applications for membership.* None were presented.
4. *Reports and resolutions.* None were presented.
5. *Special communications.* None were received.
6. *Reading of papers.*

Owing to a misunderstanding, Dr. AUGUST JEROME LARTIGAU was not present to read his paper on "Recent Advances in the Ætiology of Rheumatic Fever."

Dr. ARTHUR W. ELTING read a paper on "Tendon Transplantation in the Treatment of Paralytic Deformities."

The PRESIDENT then declared Dr. Elting's paper open for discussion.

Dr. A. VANDER VEER expressed his great obligation to Dr. Elting for the valuable and carefully prepared paper. The historical portion especially was of great interest. He had talked about this operation with surgeons who were specialists in orthopedics and they had not given him much encouragement. The painstaking, lucid and precise description in this paper of the pathology and pathological lesions of club feet as well as of the technique of the operation was such that he felt able after hearing this paper to perform the operation. Dr. Vander Veer felt sure that this procedure would be of great service in club feet cases. He related a case of traumatism of the foot, which he saw some years ago, where the tendon of the tibialis anticus was destroyed. Dr. Vander Veer attached the tendon of the peroneus longus and the case improved. Formerly the deformities from infantile paralysis were rather hopeless from a surgical standpoint, but Dr. Vander Veer was convinced that this procedure gives great encouragement. In conclusion, he said that this was the kind of paper it paid one to hear, as it taught something new along the line of progressive scientific surgery.

Dr. MacFarlane expressed his pleasure, from a medical point of view, in listening to this paper. The procedure as described was a revelation to him. This treatment is perfectly reasonable and it opens a great field. To compensate disease processes Nature increases the amount of work in other parts, and so this operation is along the line of work Nature follows. He moved that the privileges of the floor be extended to the guests present. The motion was seconded and carried.

Dr. Gorham thanked the President and members of the Medical Society of the County of Albany for this opportunity to express his appreciation of Dr. Elting's paper. He was especially interested in this paper, as he sees many orthopedic cases. Observation of Nature's methods will bring about such procedures as the one described. He cited a case of tuberculosis of the knee joint where he kept the knee completely immobilized for two years, and expects a perfect result. In doing this he endeavored to imitate Nature.

There appearing no further business the Society adjourned.

Henry L. K. Shaw, *Secretary*.

William H. Murray, *President*.

Medical Society of the County of Rensselaer

The monthly meeting was held Tuesday evening, December 10, 1901, at 8:30 p. m., at the Court House, in the City of Troy, N. Y. The meeting was called to order by the President, Dr. G. A. Bradbury, in the chair. The following members were present: Drs. G. A. Bradbury, H. E. DeFreest, James H. Lyons, R. A. Kirkpatrick, R. H. Ward, C. B. Herrick, John Barnes, L. F. Adt, T. G. Dickson, Wm. Finder, Jr., W. B. Sabin, M. Felter, O. Mallet, T. G. Wright, H. C. Gordinier, R. H. Irish, L. B. Rulison, M. A. Wheeler, C. E. Nichols, E. W. Becker, H. Richard, W. W. Seymour, J. C. Hutchinson, C. H. Travell, H. Elliot, M. J. Zeh, D. G. Buchanan, J. H. Flynn, M. D. Dickinson, W. E. Silcocks, D. W. Houston, R. B. Bontecou, J. B. Harvie.

Reading minutes of last meeting. Dr. Seymour moved that the minutes as read be adopted. Seconded and carried.

Members elected: Dr. R. H. Irish, Upper Troy.

New members proposed: Dr. E. J. Hanratta, Watervliet, as associate member; as members, Drs. Edgar Stillman, Flynn, Gormly, McCarthy and Silcocks.

Reports of committees. Dr. M. D. Dickinson, on committee to select delegates to the Medical Society of the State of New York, reported the names of Drs. Wm. Finder, Jr., H. Elliot, B. S. Booth, William Kirk, Jr.,

T. G. Wright, F. G. Dickson, together with the names adopted previously, which were Drs. H. E. DeFreest, D. A. Davidow, Jas. Love, R. A. Kirkpatrick.

Scientific papers read: I. "Digitalis and Its Use," Dr. J. A. Barnes. Discussed by Dr. W. W. Seymour, who gave a thorough discussion as to its uses in cardiac affections.

II. "Aneurism of the Thoracic Aorta; Fourteen Cases with Seven Autopsies. Illustration of the Paper with Diagrams and X-Ray Photographs." Dr. H. C. Gordinier. Dr. Gordinier's paper was discussed by Dr. M. D. Dickinson, Dr. W. W. Seymour and Dr. Reed B. Bontecou, all of whom gave histories and symptoms of cases that had come under their immediate care.

III. "Histology of the Kidney," Dr. Wm. Finder, Jr. Dr. Finder's paper gave a history of the kidney and was very thorough. The paper was discussed at some length by Dr. D. W. Houston.

The papers having been completed, the President directed a letter, received from the Albany Medical Annals, to be read by the Secretary, which was as follows:

November 14, 1901.

Dr. G. A. Bradbury,
President, Medical Society of the County of Rensselaer.

Dear Doctor:

The Albany Medical Annals desires to offer its pages to your Society for the publication of the minutes of your proceedings, and respectfully directs your attention to the reports of the Medical Society of the County of Albany, which have been published with advantage on all sides during the last three years. The value of such publication of the minutes lies in their availability, and in the permanence of the record. There is also an added element of importance in the greater care with which discussions are prepared and conducted, and greater interest in the work of the meetings.

The Annals believes that it should have recognition as the local medical journal, and that the locality should make some greater outward showing of activity in the work of societies. The offer is made with the hope of general stimulation in this direction, and without request for compensation.

If the Secretary of your Society will forward promptly, after each meeting, the copy of the minutes, ready for the printer, the Annals will cheerfully publish them; and will also accept for publication papers read before your Society and prepared for publication, when the writers so elect.

Yours very truly,
Albany Medical Annals.
M.

Dr. Wm. Finder moved, and the motion was seconded by Dr. M. D. Dickinson, that the Society accept the kind offer made by the Albany Medical Annals.

Dr. W. W. SEYMOUR moved to amend the motion and refer it to a committee, but the amendment was lost and the prevailing motion was carried unanimously.

Dr. C. HOWARD TRAVELL arose and remarked, inasmuch as we were having refreshments at the close of each meeting, that each member of the Society be assessed one dollar to defray such expenses. Carried.

Dr. W. W. SEYMOUR moved that the meeting adjourn. Carried.

H. E. DEFREEST, *Secretary.*

GEORGE A. BRADBURY, *President.*

Medical News

Edited by H. Judson Lipes, M. D.

ALBANY MEDICAL COLLEGE ALUMNI ASSOCIATION OF THE CITY OF NEW YORK.—The seventh annual banquet of this Association will be held at the Arena, No. 41 West 31st street, on the evening of January 23, 1902. All Alumni of the college are cordially invited to attend. The following are the officers of the Association: President, Dr. Allen Fitch ('79); vice-president, Dr. Thomas H. Willard ('87); secretary, Dr. Warren C. Spalding ('81); assistant secretary, Dr. Charles Gartner ('95); treasurer, Dr. William Geoghan ('73); governors, Drs. Frederic Loughran ('90), W. Frederic Holcombe ('49), George H. Baker ('86), C. deW. Van Dyck ('79), Clarkson C. Schuyler ('75), *ex-officio.* The committee of arrangements consists of Drs. Meyer L. Rhein ('80), John H. Dorn ('64), Albert S. Newcomb ('66), Edward F. Quinlan ('68), William Stevens ('75), L. N. Lanehart ('83), John A. Cutter ('86), Robert E. Fivey ('87), Robert F. Macfarlane ('88), Edward B. Colburn ('90), A. Parker Muir ('96), B. Livingston ('97).

THE WILL OF THE LATE JOHN G. MYERS.—Among the bequests in the will of the late John G. Myers of interest to the medical profession are the following: Five thousand dollars ($5,000) to each of the following institutions: The Albany Hospital; the Albany Guardian Society and Home for the Friendless; the Fairview Home for Friendless Children; the Albany Guild for the Care of the Sick Poor; the Albany Protestant Orphan Asylum; the Albany City Homœopathic Hospital and Dispensary, and the Saint Peter's Hospital in the City of Albany.

THE ALBANY HOSPITAL RECEPTION PAVILION FOR INSANE.—At a recent meeting of the Board of Supervisors of Albany county the sum of eight hundred dollars ($800) was appropriated for the purchase of furniture and for making certain changes in the reception pavilion for insane of the Albany Hospital.

New Homœpathic Hospital Site.—At a recent meeting of the board of governors of the Homœopathic Hospital it was decided to purchase the site on North Pearl street, adjoining the Fourth Presbyterian church, for the erection of a modern hospital.

The Albany Filter Plant.—In his annual report for the year ending September 30, Superintendent Bailey, of the Water Bureau, calls particular attention to the filtration plant, to which he attributes a reduction of 67.86 per cent. in deaths from typhoid, of 60 per cent. in deaths from diarrhœal diseases and of 18.76 per cent. in the general death rate from the average of the ten years previous to 1899.

The Engineering News, one of the authorities of this country on engineering matters, publishes part of Superintendent of Water Works George I. Bailey's annual report, and makes this editorial comment thereon:

"A large reduction in the death rates from typhoid fever and diarrhœal diseases, and also a notable decrease in deaths from all causes, have accompanied the use of filtered water at Albany during the two years the filter plant has been in operation. The exact figures, together with an itemized summary of the operating expenses per 1,000,000 gallons purified, are given elsewhere in this issue. In the two years involved, a total of 10,069,075,000 gallons has been purified, at an average cost of $4.65 per 1,000,000 gallons for all operating expenses due to purification. This means only 0.465 cents per 1,000 gallons. The total cost of purification would, of course, include interest charges and depreciation on the plant. The purification works, including the auxiliary pumping station and the long steel conduit to the old pumping works, cost approximately $500,000.

Medical Society of the State of New York.—The annual meeting of the Medical Society of the State of New York will be held at Albany, New York, Tuesday, January 28, 1902, and continue for three days. The scientific part of the program is being prepared by the Business Committee, which consists of Dr. Nathan Jacobson, 430 S. Salina street, Syracuse, Dr. George R. Fowler, Brooklyn, and Dr. William C. Krauss, Buffalo. Members and delegates desiring to read papers will please communicate with the chairman of this committee. A rebate will be given by the railroads to members and delegates attending this meeting, but it is necessary, to obtain the rebate, that a certificate be obtained from the ticket agent at the starting point, which certificate will be given by the agent for the asking.

Pathological Institute of the New York State Hospitals.—The reorganization of the Pathological Institute of the New York State Hospitals has recently been effected. The Civil Service Commission, after an examination of prospective candidates held December 7th, has certified to the eligibility of Dr. Adolf Meyer, of the State Hospital and Clark University, Worcester, Mass., and he has been appointed by the Lunacy Commission to fill the position of director of the institute.

Four Hundred Dollar Prize.—Dr. J. B. Mattison, Medical Director, Brooklyn Home for Narcotic Inebriates, offers a prize of four hundred dollars for the best paper on the subject: "Does the habitual subdermic use of morphia cause organic disease? If so, what?"

Contest to be open two years from December 1, 1901, to any physician, in any language. Award to be determined by a committee: Dr. T. D. Crothers, Hartford, Conn., editor *Journal of Inebriety,* chairman; Dr. J. M. Van Cott, Professor of Pathology, Long Island College Hospital, Brooklyn, and Dr. Wharton Sinkler, Neurologist to the State Asylum for the Chronic Insane, Philadelphia. All papers to be in the hands of the chairman by or before December 1, 1903; to become the property of the American Association for the Study and Cure of Inebriety, and to be published in such journals as the committee may select.

Personal.—G. **Van V. Warner**, of Gloversville, N. Y., (of the class of 1900) is representing D. Appleton & Company for North Eastern New York.

—Dr. **Fred M. Barney** (A. M. C. '88), is stationed at Manila, P. I.

—Dr. **Wm. Winthrop Betts** (A. M. C. '83), of 206 South Spring street, Los Angeles, California, announces that he will limit his practice to ear, nose, throat and diseases of the chest.

—Dr. **Arthur T. Laird**, of the Bender Laboratory, has been appointed Resident Physician of the County Almshouse, by the Mayor of the City of Albany.

—Dr. **Willis G. Macdonald** has been appointed as a member of the Board of Public Instruction. His present term will expire on December 31, and the re-appointment is for seven years. Dr. Macdonald was originally named to succeed the late Angus McD. Shoemaker.

—Dr. **Walter W. Scofield**, of Dalton, Massachusetts (A. M. C. '82), has been appointed a trustee of the Massachusetts Hospital for Epileptics.

—Dr. **Frederick D. Branch** (A. M. C. '99), who went to the Philippine Islands as a contract surgeon, is now an assistant surgeon with the rank of captain and is stationed at Cebu.

Book Reviews

Operative Surgery. By Joseph D. Bryant, M. D. Vol II. New York: D. Appleton & Co. 1901.

This volume completes the third edition of a work which has received world-wide recognition. The entire subject of operative surgery was treated in eighteen chapters, of which twelve were included in Vol. I, and the remaining six are concluded in Vol. II.

The opening chapter, XIII, of the volume deals with operations on the mouth, pharynx, nose and œsophagus.

Chapter XIV contains an exhaustive discussion of operations on the viscera connected with the peritoneum, and it is the most complete and satisfactory chapter in the volume. The surgery of the stomach and intestines is especially well treated in this chapter, and all the latest ideas regarding methods and technique are presented.

Operations on the anus and rectum is the subject of chapter XV, and, though brief, it nevertheless presents all the essential features of this class of operations.

Chapter XVI is devoted to the surgery of the neck and thorax, and contains an excellent discussion of the methods of attacking carcinoma of the breast as well as the latest advancements and technique of the surgery of the pleural cavity and lung. The operations on the thyroid are also exhaustively considered.

The operations on the urinary bladder are the subject of chapter XVII, and in it is presented an adequate discussion of practically all the important features of this department of surgery.

The volume concludes with a chapter devoted to operations upon the scrotum and penis and miscellaneous operations, such as the treatment of ununited or viciously united fractures, operations on the frontal and maxillary sinuses and operations upon the cervical sympathetic nerve.

The volume contains 827 illustrations, forty of which are colored plates. The execution of these illustrations is especially good, and it is not too much to say that there is no work on operative surgery so well illustrated as is this one. The surgical anatomy of practically all the important operations described as well as the special instruments designed for each of these operations are accurately presented in the illustrations. The author also presents a cut of all the instruments required for each general variety of operation. This is an especially valuable feature of the work, for it enables the surgeon or nurse to determine at a glance just what instruments may be needed for the operation in hand. Care has also been taken to so arrange the illustrations that they correspond with the text and, whenever possible, they have been placed upon the same page as the text.

The arrangement of the subject matter is excellent. The surgical anatomy of each region is first described, after which comes a description of each of the more important operations proposed for the relief of the condition under discussion. Under the head of "Remarks" the author briefly reviews the advantages and disadvantages of the operations proposed, and in many operations enumerates the precautions which should be observed.

"General Remarks" and "After Treatment" form separate headings, under which certain general indications for operation and the extent to which it should be carried as well as the general management of surgical cases after operation are discussed. "Results" is the title of another heading, under which the author states the general mortality rate of each of the more important operations proposed, as well as the percentage of "cured" and "improved."

The publishers deserve great credit for the excellent typographical work and the attractive appearance of the volume.

No other work in the English language on operative surgery covers the ground so accurately and completely as do these two volumes, without which the library of every surgeon is incomplete. A. W. E.

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Paediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by HENRY W. CATTELL, A. M., M. D., Philadelphia, U. S. A., with the collaboration of JOHN B. MURPHY, M. D., of Chicago; ALEXANDER D. BLACKADER, M. D., of Montreal; H. C. WOOD, M. D., of Philadelphia; T. M. ROTCH, M. D., of Boston; E. LANDOLT, M. D., of Paris; THOMAS G. MORTON, M. D., and CHARLES H. REED, M. D., of Philadelphia; J. W. BALLANTYNE, M. D., of Edinburgh, and JOHN HAROLD, M. D., of London, with regular correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume II. Eleventh Series, 1901. Philadelphia: J. B. Lippincott Company. 1901.

Among the articles on therapeutics in this volume are two interesting papers on the subject of injections of cocaine into the spinal column. In one Dr. T. H. Tuffier states that he has performed two hundred and fifty-two operations under spinal cocaine analgesia, and that he believes the method of as much value as general anesthesia for extra-peritoneal operations, but that he is not ready to advise its use in intra-peritoneal work. He finds that the principle disadvantages in its use are the nausea and vomiting and the subsequent headache and rise of temperature. In the other article, Dr. A. Doléris describes the oxytoxic effect of injections of cocaine into the lumbar region of the spinal column, and says that he has found the procedure of value in inducing labor and in uterine inertia. Dr. Robert Jardine describes his method of treating puerperal eclampsia, which consists in the use of saline diuretic infusions (sodium chloride and sodium acetate, of each one drachm to the pint of water), in addition to other measures generally adopted. In three years the mortality has fallen from forty-seven to twenty-four persons, at the Glasgow Maternity Hospital, as a result of the use of this method. In an article on "The Treatment of Malignant Tumors by an Anticellular Serum," Dr. Wlaeff, of St. Petersburg, gives some very encouraging results from the use of a serum obtained from geese rendered immune to parasites obtained in pure culture from malignant growths in human beings. Dr. A. Chauffard has been highly successful in the medical treatment of cholelithiasis by the use of sodium salicylate and sodium benzoate, one to two grammes of each per day, and Carlsbad salt and Haarem oil every eight or ten days. An article on "Adulteration of Foods," by Emil Schlichting, shows the pressing need of the passage by Congress of the national pure food bill.

In the section on medicine there are a number of interesting and suggestive articles, among the more noteworthy of which are "Some Relations of Osmosis and Ionic Action in Clinical Medicine," by Henry Sewall, Ph. D., M. D.; a sensible paper on "Croupous Pneumonia," by James Tyson, M. D., and an illustrated article on "Smallpox, with Particular Reference to the Prevalent Epidemic," by Jay F. Schamberg, M. D.

The neurological section is especially strong as it includes an interesting paper by Prof. Santiago Ramon y Cajal, entitled "Some Suggestions as to the Mechanism of Mental Operations," and three articles on locomotor ataxia: "Movement Therapy for Locomotar Ataxia," by H. S. Frenkel, M. D., a clinical lecture on the disease, by Dr. M. Allen Starr, and an instructive lecture on "The Detection of Locomotor Ataxia in its Early Stages," by Alfred Fournier, M. D.

Under obstetrics and gynecology, Dr. R. C. Buist contributes a paper on "Resources in Narrow Pelvis," and Dr. J. W. Ballantyne, one on "Abortions," in which he points out the need of a special hospital for cases of receiving abortion and other forms of pathological pregnancies.

The other specialties are more briefly represented, and the volume closes with "The Pronunciation and Definition of Some of the Newer Medical Words," by W. A. Newman Dorland, M. D. R. G. C.

An International System of Electro-Therapeutics. For Students, General Practitioners and Specialists. By Numerous Associated Authors. Edited by HORATO R. BIGELOW, M. D. *Second Edition. Revised and Brought up to Date, with Several New Departments Embodying the most Recent Developments of the Science.* Edited by G. BETTON MASSEY, M. D. Thoroughly Illustrated. Royal Octavo. Pages x-1147. Prices Net, Delivered, Extra Cloth, $6.00; Sheep, $7.00; Half-Russia, $7.50. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

The first edition of this work was issued in 1894, and in 1895 the F. A. Davis Company published an abridged volume entitled "International Text-Book of Medical Electro-Physics and Galvanism," containing nine contributions upon the general principles of medical electricity, covering 386 pages. The present volume is a revision of the original edition and consists of a series of monographs on the various uses of electricity, local and general. This is comprised in an introductory section of two chapters followed by sections upon "Electro-Physics and Electro-Physiology," "Gynecology and Obstetrics," "Diseases of the Nervous System," "Disorders of the Abdominal and Thoracic Viscera," "Diseases of Childhood" and "Electro-Surgery." These articles are all very comprehensive, and the effort is made to cover every possible use of electricity in its application to the diagnosis and treatment of disease, so that this volume may justly claim rank as an encyclopædic treatise upon the subject of medical electricity.

Among the contributions is one by Dr. W. F. Robinson, of Albany, upon Electro-Diagnosis, in which the principles of diagnosis are explained, and the methods of conducting the tests are described. This paper has been revised and brought up to date, and is much more extensive than in the earlier volume. The suggestion might be offered that some consideration of the motor points of Remak and description of the areas upon the skin for the excitation of different nerves and muscles would prove a convenience, particularly as there is no accurate and complete table of this kind published in the American and English works upon the subject, although the Germans have been very explicit in this direction. Another fact of interest to Albanians is the mention of a book by Thomas Brown, published in this city in 1823, entitled the "Ethereal Physician, or Medical Electricity Revived," in which the author "recommended Franklinic electricity for paralysis, tic doloureux, epilepsy, chorea and various other diseases," among which may be mentioned abscesses, "cramp convulsions," "felons," "St. Anthony's fire," consumption, quinsy, cold feet, sores, wounds, burns, sprains and bruises.

The section on the electrical treatment of fibroid tumors of the uterus is written by Dr. Grand and Dr. Famarque, assistants at the clinic of Dr. Apostoli; the Apostoli method is fully exploited, and good results are claimed.

The sections on the treatment of diseases of the nervous system are quite extensive, including chapters upon the brain, spinal cord, peripheral nerves and neuroses. The influence of suggestion in the use of electricity in this department is fully acknowledged. Some of the statements in this series of papers are fairly open to question. For example, an attempt is made to base maniacal and melancholic states upon, respectively, arterio-serous and arterio-venous fluctuations in the cerebral circulation. It can hardly be claimed that any accepted pathology of insanity has been reduced to so simple basis. Five cases of melancholia are reported in which the patients were "cured in, respectively, eleven, fourteen, eighteen, nineteen and thirty days; also, three cases of melancholic stupor were cured under the influence of electricity"! Another case, "in which the only symptoms were mental pain and fixed ideas was cured in a week"! The chapter or chorea is confusing and indefinite, and a distinct line is not drawn between chorea minor and tic. A paragraph is given to the pathology of chorea, but no mention is made of the modern conception of Sydenham's chorea as an infectious disease.

In the chapter upon diseases of the spinal cord, the division of the motor path into two segments, according to Gowers in his edition of 1892, is given, and no mention is made of the neurone concept, which is recognized by the same authority in the later edition of 1899. "Wallerian" degeneration is described as secondary degeneration of the fibres of the cord.

From perusal of this work, it appears that the tendency among electricians to look for definite results from the use of this agent, even though it is entirely empirical, leads to disregard of other methods of treatment. It should be said, for instance, that a physician who relies solely upon electricity in the treatment of Sydenham's chorea, and does not insist upon mental and physical rest, disregards the prime therapeutic requisite, and exposes his patient unnecessarily to danger. When electricity is indicated, its conjoined use with other therapeutic measures promises the best results.

The extravagant claims often set forth for this agent imply an enthusiasm, not generally shared by practitioners not engaged exclusively in this department. Abundance of faith has long characterized the advocates of medical electricity. Thus, Thomas Brown, whose curious little work is cited, gives the following account of a rapid cure:

"Betsy Brown, one of my daughters, was taken with a most severe pain in her breast, at 1 o'clock at night, on the 24th of November last. As she had long known of the benefit of electricity, she got up and went to the machine; in two minutes, by passing a few light shocks through her breast, the pain was *removed.* She then returned to bed. In about half an hour the pain returned. She arose and had the same remedy again applied, which, in a few minutes again *removed* the pain, of which she has had no return."

Thomas Brown also indicated his entire absorption in the subject in the following remarkable statement:

"I have not a doubt, but that in time, as electricity becomes properly *managed* and *applied,* my assertions will be proved to be correct. For I *don't* write at randum. I have well *considered* of what I write. I know the truth of what I say; and it is for the good of mankind I write, and it is no more than my *duty* to do so. I have often sympathized with my fellow-creatures under their sufferings, and rejoice that I can now direct them to that medicine, which God has provided for their *relief.* Why, in his wisdom it should have been so little known before is not for me to say. Nor neither why I, who am not capable of treating a subject in a learned and methodical manner, should have been called to this work. All I have to do, is, to acquiesce in humility and thankfulness."

Transactions of the American Electro-Therapeutic Association. Complete Account of Ninth Annual Meeting, held at Washington, D. C., September 19, 20 and 21, 1899; also Tenth Annual Meeting held at New York City, September 25, 26 and 27, 1900. Illustrated. Pages xv-391. Size, 9¼ by 6¼ inches. Price, Extra Cloth, $2.00 Net, Delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

The custom of placing volumes of transactions upon the market does not generally obtain in this country, and in this respect this volume upon the ninth and tenth meetings of the American Electro-Therapeutic Association marks a departure, which should receive the support of the book-buying medical public.

The papers indicate a commendable activity on the part of the Association, and cover a wide range of subjects, among which may be mentioned several contributions upon the surgical uses of electricity, its availability in tuberculosis, and in neurasthenia, and in several special departments of practice.

The reports of the standing committees upon direct current generators and electrodes are helpful in establishing exact standards in the direction of the application of electricity. The electric light and X-ray work are also considered.

The publishers have prepared a presentable volume.

A Compend of Obstetrics. Especially adapted to the Use of Medical Students and Physicians. By Henry G. Landis, A. M., M. D., Late Professor of Obstetrics and Diseases of Women in Starling Medical College. Revised and Edited by William H. Wells, M. D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic; Instructor of Obstetrics in the Jefferson Medical College, Philadelphia, etc. Seventh Edition. Illustrated. Published by P. Blakiston's Son & Co., 1012 Walnut Street., Philadelphia, 1901. Price, Cloth Binding, 80c.; Interleaved for the Addition of Notes, $1.00 Net.

The use of compends by students during their regular class work is not to be recommended, though these books are often of value when a rapid review is necessary. This little works covers the subject as thoroughly as possible in so small a volume. H. JUDSON LIPES.

Current Medical Literature

SURGERY

Edited by A. Vander Veer, M. D.

Chronic Proliferating Osteomyelitis. (*Les osteomyelitis chroniques proliferantes des os.*)

B. Kozlovsky. *Revue de Chirurgie, No. 6, 1900.*

In addition to the typical, acute osteomyelitis, there are rarer forms of this disease which have been known as albuminous periostitis and as proliferating fibrous osteomyelitis. These latter conditions have been classified by different authors as either syphilitic or tuberculous lesions, or as malignant neoplasms. It has remained for bacteriology to demonstrate that these conditions are due to a staphylococcus infection, to which Kocher has given the name of staphylomycosis. Kocher further states that those so-called sarcomata of the bones which disappear spontaneously or recover after a simple incision are of this inflammatory character. He further observes that even the microscopical examination of these specimens may lead one to suppose that they are sarcomatous. The writer reports three cases in which he believes this condition of a chronic proliferating osteomyelitis to have existed and in which the diagnosis of sarcoma was made. In one case, a man of forty-three years presented himself with a tumor of the femur which clinically appeared to be a sarcoma. Operation was advised but declined, and the patient subsequently recovered. In the other two cases the tumors were explored and in both of them distinct foci of inflammation with necrosis of the bone were demonstrated, and from both of these cases staphylococci were obtained in culture. In one case the tumor involved the lower end of the humerus, and in the other the femur. The writer mentions a case of Kocher's in which Langhans pronounced the tumor to be a sarcoma, but it recovered after a simple incision. The onset of these cases is obscure and usually there is no febrile attack at onset or during the course of the disease the gradual development of .. tumor of the bone, associated with more or less pain, being characteristic of the condition. The writer believes that the only positive mode of making a diagnosis is to explore the tumor and look for a necrotic focus.

Concerning the Action of Iodoform and a Substitute for Iodoform. (Ueber Jodoformwirkung und Jodoformersatz.)

ALEXANDER FRAENKEL. *Wiener klinische Wochenschrift, No. 47, 1900.*

Many investigations have been made to determine the exact mode of action of iodoform upon the tissues. Most of these investigations agree in the main as to the nature of this action. The writer undertook a series of experiments to determine in the first place the exact histological changes produced by iodoform, and in the second place to compare these changes with those produced by other powdered substances. The experiments were performed upon guinea pigs and consisted in excising some of the deeper tissues, introducing the iodoform or other powder and closing the wound. After the lapse of from eight to fourteen days these wounds were excised and studied. The tissues treated with iodoform showed a marked inflammatory process in the earlier stages with extensive leucocytic infiltration, while in the latter stages a marked tendency to a proliferation of connective tissue was evident. The wounds treated with powders possessing no chemical action, such as animal charcoal, lycopodium and other innocuous sterilized powders manifested but slight inflammatory tendencies in the earlier stages, but were characterized by a marked tendency to proliferation of connective tissue in the later stages. The action of unsterilized innocuous powders resembled that seen after the use of iodoform. It has long since been demonstrated that iodoform possesses practically no bactericidal action. The writer has arrived at the conclusion that the main effect of iodoform upon the tissues is that of the irritation produced by a foreign body combined with a certain amount of chemical action, which is responsible for the chemotactic properties manifested by it. Its main effect upon the tissues is the stimulation of the processes of repair, and in this way it antagonizes the action of the bacteria. The writer considers it advisable to introduce, if possible, for the dressing of wounds, substances which will have the same stimulating effect upon the tissues without the unpleasant toxic effects sometimes manifested by iodoform. As a result of his experiment, he believes that sterilized, powdered animal charcoal made from bone is a most satisfactory substitute for iodoform, since it possesses an equally marked stimulating effect upon the tissues, and at the same time is free from all toxic action. He advises the use of the animal charcoal in a ten per cent. glycerine emulsion or upon gauze prepared in a manner similar to iodoform gauze. In this fashion he has treated twenty-one cases of tuberculous infections of the bones and joints with very satisfactory results. Since in the treatment of tuberculosis it is especially desirable to stimulate the proliferation of the fixed tissues, he believes that this method is especially adapted for the treatment of surgical tuberculosis.

Dental Caries as a Factor of Disease.

J. R. Lesson. *Edinburgh Medical Journal, December, 1900.*

Attention is called to the great evil resulting from decayed teeth. The general practitioner pays little attention to this subject, and little is taught about it in the medical schools. Many people are going about with rotten teeth, "carrying small cess pools in their mouths filled with fetid abominations of stinking food debris." The mouth cavity forms an excellent incubator for bacteria, which are liable to contaminate everything passing their way. The author makes it a point to examine the mouths of all patients complaining of neuralgia, bad breath, dirty tongue, disordered stomach, etc., and has made some striking recoveries by merely referring them to a dentist to have the offending members extracted. In cases of anæmia he finds that very often the application of iron to the teeth is far more efficacious than to the stomach. Many diseases of the naso-pharynx extend from carious teeth. A man with a decayed molar rarely has a clean tongue. Throat complaints are frequently septic in their origin, and most ear troubles extend from the throat. Dentists tell us our teeth are becoming progressively weaker and more and more liable to decay, and certain it is that nose and throat disorders are not growing less frequent. Prophylaxis is most important. The teeth should be cleaned twice a day and always the last thing at night. A stiff brush with long bristles should be used. Children should not be allowed to eat candy or biscuits on going to bed. More frequent visits to the dentist should be made for inspection of the teeth. The writer concludes: that physicians should look more frequently into their patients' mouths; that the public need educating upon this question, and are yet hardly aware of its importance; that by teaching our children the methods and principles of oral hygiene, they will constantly be saved from much suffering, and probably from illness, in their lives; that few, even of the enlightened ones, care for their teeth as they really should do; and that we as a profession do not yet recognize the important part bad teeth play as factors of disease.

MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

A Case of Pneumopyopericardium. (Ein Fall von Pneumopyopericardium.)

Sievers. *Berliner klinische Wochenschrift, March 25, 1901.*

The patient with this rare condition was a female servant, thirty-two years old, who had had syphilis some years before. She entered the hospital, complaining of weakness, dyspnœa, persistent cough with a rusty foul-smelling expectoration. She had herpes labialis. Examination showed nothing abnormal in chest except that at the apex of the left lung the note had a tympanitic quality, and that over the scapula and axilla of the same side fine moist rales were evident. Nothing abnormal was noted about the heart or abdominal cavity. The diagnosis was gangrene, following a pneumonia in a person who had had severe syphilitic infection. Fourteen days later examination revealed absence of cardiac dullness and over the anterior aspect of the left chest the percussion note had a box tone as in emphysema. The erect position made no difference in the percussion. The heart sounds had a metallic character and at times there was a pericardial note with an amphoric echo. In addition, at the apex a metallic splashing was heard coincident with the cardiac activity. This splashing consisted of small and medium sized rales, at times abundant and at other times less abundant. It had the sound of a water-wheel. The temperature was 39°. The pulse weak, regular, 120-130. The autopsy showed a gangrenous cavity of the left lung, following a pneumonia. The process had extended to the surface of the lung, close to the left of the pericardium where it had produced a small encapsulated pyopneumothorax. From this air and pus had passed into the pericardial sac by an opening in its lower part.

The Origin of Poisoning by Meat. (Zur Frage noch der Entstehung von Fleischvergiftungen.)

BAIL. *Prager medicinische Wochenschrift, February 14, 1901.*

Although formerly the different forms of poisoning after the consump-and nervous symptoms occur, these are due to the common products of pu-seek to make a sharp differentiation and to reserve the term botulismus for a well-marked morbid entity.

After the eating of food which has undergone putrefaction, if intestinal and nervous symptoms occur, these are duse to the common products of putrefaction; if in food which has not undergone putrefaction, a micro-organism is found and this grows within the body of man; this is not a true poisoning, but a specific infection. It is of no importance if the infecting organism existed in the animal before its death, or if it appeared after its death. In contradistinction there is a small but well-marked group of poisoning by meat and sausage. In this group a bacterium develops in the animal food and develops specific and powerful poisons without itself being able to grow. It is characterized by its specific action and by the intensity of the poison producer. It is of interest to determine the way by which these poison-producing micro-organisms gain access into the food. In one epidemic the food was supposed to have been infected by flies from a nearby glue factory. The deductions are that there should be extreme cleanliness in regard to food and food utensils; more common use of fly netting and the prevention of the exposure of food in the summer. Care should also be exercised as to conditions which might lead to an increase of flies, as glue, fertilizer and sewage reducing factories.

Intermittent Fever as a Sign of Mediastinal Tumors. (Intermittirendes Fieber als Symptom eines mediastinal Tumors.)

WITTHAUER. *Münchener medicinische Wochenschrift, February 5, 1901.*

Mediastinal tumors are not rare conditions. Although they may be diagnosticated in life, there are many doubtful cases in which the differential diagnosis from aortic aneurism and tuberculosis of the glands may be difficult. The writer gives the history of a girl, twenty-four years of age, who entered the hospital with left pleurisy. After aspiration of the fluid, her temperature for five months showed a most remarkable course. She would be free from fever for three or four days, then her temperature would go to 103° or 104°, gradually decline and reach normal on the third day. When her temperature was normal her general condition was good, while at the time of fever she was weak and complained of pain, dyspnœa and cough. Malaria, tuberculosis and streptococcus infection were excluded. The post mortem examination revealed a sarcoma of the posterior mediastinum with extension into the auricles and the right lung. There was no evidence of malaria and no indication of pus. Malignant tumors induce fever, but not with the regularity of this case. It is probable that the fever was due to toxines from the tumor and its regularity may have been affected by its extension to the auricles. The case is reported with the hope that this temperature curve may be found to be a symptom of a condition difficult to recognize.

Clinical Observations on the Use of Carbon Dioxide Baths in the Treatment of Heart Diseases. (Klinische Beobachtungen über die Anwendung von Salz und Kohlensaürebadern in der Behandlung der Herzkrankheiten.)

BATTISTINI and ROVERE. *Zeitschrift für diätetische und physikalische Therapie, Band 4, Heft 7.*

The authors employed the Schott method of carbon dioxide baths in thirteen cases of various forms of heart disease. Sodium chloride was added and they were very particular about the duration of the bath and the temperature. The arterial tension was taken before, during and after the baths with the Riva Rocci instrument. In cases where there was an increased tension before the bath they were unable to detect any fall, as is claimed by some observers, but in other cases there was an observable increase after the bath. The authors conclude that these baths are only serviceable when they bring about an increase in tension. In nearly all the cases there was decrease of from ten to twenty beats in the pulse rate after the bath, but there was no relation between the pulse rate and the arterial tension. They were unable to detect the decrease in the size of the heart dulness claimed by some observers. In most cases there was a noticeable improvement in the dyspnœa and cardiac action. In uncompensated cases of heart disease these baths are contraindicated and also in cases of angina pectoris and arterio sclerosis. The baths seem to have the best effect in cases of mitral disease. Each patient must be studied and in the right class of cases there is no doubt in the minds of the authors that the carbon dioxide baths form an important therapeutic agent in the treatment of heart disease.

NEUROLOGY

Edited by Henry Hun, M. D.

The Crossed Phenomenon of Sciatica. (Ueber das gekreuzte Ischiasphänomen.)

J. Fajersztajn. *Wiener klinische Wochenschrift, 1901, No. 2.*

For some years the French have recognized, under the title of "signe de Lasègue," a well-known symptom of sciatica, which has been given a place in the German text-books as the "Ischiasphänomen." This symptom consists of the fact that when the affected limb of a patient suffering with sciatica is flexed at the knee, the thigh may be also flexed upon the abdomen without causing pain, thus offering a contrast to the result obtained by flexing the thigh when the leg itself is extended. In the latter case pain results, which varies in intensity with the degree of neuritis present. The pain is distributed along the course of the nerve, and most frequently is localized in the region of the sacro-sciatic notch, at the so-called point of exit of the nerve, in the popliteal space, the calf muscles, or at all of these points. The pain may also be accompanied by paræsthesiæ. The author discusses at some length experiments made to determine the cause of this phenomenon, and believes that it is due to stretching of the nerve, and not to the pressure upon the nerve exerted by the muscles when in a state of contraction. It is shown that in the ordinary movements of walking, which involve a simultaneous flexion of the leg and extension of the thigh, the sciatic nerve is not put upon the stretch, but adjusts itself to the conditions; whereas the combined extension of the leg and flexion of the thigh do not constitute a common movement, and the nerve is subjected to an unaccustomed strain, which, during its inflamed state, produces pain.

The author then discusses a symptom which he calls the "crossed sciatic phenomenon." He has observed that passive movements in the unaffected limb, similar to those necessary to elicit the sciatic pain as above described, will be followed by pain and paræsthesiæ in the affected side, identical with these manifestations when the diseased limb itself is tested. The patient is placed upon his back, and the healthy limb, extended at the knee, is slowly elevated to an angle of from thirty to one hundred degrees. If no pain is elicited, the movement is repeated more energetically, and is accompanied by the characteristic pain in the affected side. It is thus shown more forcibly that the tension of the nerve is the factor in producing the symptom, as in this case no muscular pressure can be assumed.

The Significance of the Argyll-Robertson Pupil.

Harris. *British Medical Journal, September 29, 1900.*

The loss of the pupil reaction to light may be looked upon as an almost certain sign of antecedent syphilis, acquired or congenital, and is met with unassociated with tabes or general paralysis in syphilitics, showing otherwise no symptom of syphilis. The writer has found it in juvenile locomotor ataxia, general paralysis with congenital syphilis, progressive muscular atrophy, lead poisoning, aortic aneurism, hemiplegia, syphilitic meningitis, ataxic paraplegia, nuclear ophthalmoplegia, choroiditis, and in other patients with no ataxia or anæsthesia and with normal knee jerks, but with a clear history of syphilis. It has been described as occurring in poisoning by bisulphide of carbon and in diabetes mellitus. He has never seen it in Friedreich's disease or in disseminated sclerosis, and in only one case in which a history of syphilis seemed to be fairly excluded. The pupils may be very small, large or intermediate in size, and are frequently unequal. The very small pupils cannot be explained simply as paralytic myosis, but are probably due in part to a contracture of the sphincter muscle. The loss of reaction may be unilateral and this is probably only a stage in the complete loss of the reflex in both eyes.

PATHOLOGY

Edited by George Blumer, M. D.

Sputum Disinfection. (*Zur Sputumdesinfektion.*)
A. WEBER.

Kurse Erwidering auf den Artikels "Zur Sputumdesinfection," von A. Weber.

A. MŒLLER. *Zeitschrift für Tuberculose und Heilstättenwesen, Bd. II, Heft 5, 1901.*

These two articles contain a discussion on the practical methods of disinfecting tuberculous sputum.

As regards chemical disinfectants, both corrosive sublimate and carbolic acid are condemned; the former combines with the albumen in the sputum to form an insoluble albuminate of mercury, the latter coagulates the albumen on the surface of sputum masses and prevents the action of the germicide on the interior portions. If chemicals are to be used, a five to ten per cent. solution of lysol or else pyroligneous acid are recommended, both of these substances render the sputum liquid and hence can act in a diffuse manner. The objection to chemical disinfectants is that their smell sometimes nauseates the patient.

Both authors agree that the best method is the use of inflammable spit-cups, and the burning of the cups and their contents. This is not always possible on account of the expense.

After this method they consider best exposure to live steam for at least one-half hour. This usually liquefies the sputum and kills the bacilli. At times the sputum, especially the nummular form, is not completely liquefied, and the addition of caustic alkali is suggested in such cases. Boiling is not effective except when kept up for long periods.

Their discussion touches mainly on the disinfection of sputum in sanatoria, but their conclusions are necessarily also of importance in connection with private cases.

Experimental Investigation into the Pathogenesis of Aneurysms. (Experimentelle Untersuchungen über die Pathogenese der Aneurysmen.)
A. FABRIS. *Virchow's Archiv, Bd. 165, Heft 3, 1901.*

Fabris discusses the theories regarding the origin of aneurysm, and points out that the two main ones are the traumatic theory and the infectious theory. He attacked the subject from an experimental standpoint and worked mainly with dogs, on whose arteries he tried the effect of local trauma of varying degree and also of local applications of necrosing chemicals, such as silver nitrate. In his paper he describes in detail the gross and histological changes which ensued in the vessels after this method of treatment.

As regards the action of trauma, he concludes that laceration of the elastic fibres and lamellæ of the vessel wall is not in itself a sufficient cause of lasting dilatation. Trauma, as such, has, from an experimental standpoint, no great influence in the production of aneurysms. It may, however, clinically be a predisposing factor, just as in joint tuberculosis or acute osteomyelitis.

As regards local infection, he finds very strong evidence in favor of the fact that this will produce aneurysm. He was able, experimentally, to produce distinct localized vessel dilatation by the application of necrosing substance to the vessel wall of his specimens.

The histological examination showed, that following trauma, though there might be a slight temporary dilatation of the affected vessel, regenerative processes in all the elements of the vessel wall, including the elastica, soon repaired it and made it, if anything, thicker than before.

In the arteries treated with caustic there was marked destruction of the elastica of the media with little or no tendency to reproduction, the destroyed areas being replaced by connective tissue and dilatation following. He points out the clinical relation between syphilis and other infections and aneurysms, these diseases being agencies liable to produce, by their poisons, localized areas of vessel wall degeneration.

A Contribution to the Knowledge of Chondrodystrophia Fœtalis. (Beitrag zur Kentniss der Chondrodystrophia foetalis.)

BENNO COLLMAN. *Virchow's Archiv, Bd. 166, Heft 1, 1901.*

Recent Contributions on "the So-Called Fœtal Rickets." (Neuere Arbeiten über die sogenannte fötale Rachitis.)

ALBERT KLEIN. *Centralblatt für allgemeine Pathologie und pathologische Anatomie, Bd. XII, No. 20, 1901.*

The name "chondrodystrophia fœtalis" was given by Kaufmann, in 1892, to the condition also known as fœtal rickets, achondroplasia, chonodritis fœtalis, and mikromelia chondromalacica. It is probable that early writers, before the days of careful histological study, grouped under this head some cases of congenital lues and some cases of osteogenesis imperfecta, as well as true cases of chondrodystrophia.

The essential pathological basis of the disease is a disturbance of bone development, or more strictly of endochondral ossification, as the periosteal bone formation is usually undisturbed.

Kaufmann recognized three forms of the disease: (1) chondrodystrophia hypoplastica, in which there is simply a developmental stand-still of the cartilage; (2) chondrodystrophia malacica, in which the developmental disturbances are associated with softening of the bones, and (3) chondrodystrophia hyperplastica, in which the cartilage over-production accompanies the lack of osteogenesis.

The main effect of the disease is to cause a shortening of the long bones. The child exhibits an abnormal shortness of the extremities. often associated with good, or even excessive, development of the soft parts, so that the flesh may lie in folds over the shortened limbs. Sometimes the extremities are shrunken and distorted. The trunk is usually not markedly altered, though it may be short. The pelvis is small, the sternum short and narrow, and the spinal column bowed. The cranium may present various changes. Sometimes the cranial bones show excessive and abnormally marked ossification, sometimes they are soft and almost parchment-like.

Two types of faces are described in the disease: (1) cases with deep-sunken nose-root and a cretinoid physiognomy; they also have synostosis of the basal skull bones with shortening of the base; (2) cases with no marked depression of the base of the nose, but a general flattening of the organ. These cases have usually lengthening of the basal bones which are soft and almost cartilaginous. The cases generally die early without appreciable cause. Cases of ostegenesis imperfecta may show similar outer characteristics.

The histological changes present easily differentiate the disease from true rickets or any other condition liable to be confounded with it. The lesions consist in a failure of the primary cartilaginous foci to go on to bone production. The periosteal bone production is normal, or even excessive, in certain regions (epiphyseal grooves). In osteogenesis imperfecta periosteal bone formation is almost entirely lacking. The causes of the condition are quite unknown, though it is to be noted that one or two of the recorded cases were the products of incest.

LARYNGOLOGY AND RHINOLOGY

Edited by C. F. Theisen, M. D.

Laryngeal Affections Occurring with Diabetes. (*Ueber Kehlkopferkrankungen im Verlaufe des Diabetes.*)
LEICHTENSTERN. *Müchener medicinische Wochenschrift, No. 16, 1900.*

Diabetes frequently causes unusual symptoms on the part of the pharynx and larynx, as continued dryness, weakness of the voice and hoarseness. and a great dryness of the throat while speaking. The laryngeal condition is called by the author "Siccitas laryngis or laryngoxerosis." This is produced mainly by a hypersecretion. Inflammatory symptoms are not present. In the pharynx inflammatory conditions may occur. The origin of this laryngo-pharyngoxerosis, the author believes is in the central nervous system, because the secretion of the saliva as well as that of the muciparous glands of the pharynx and larynx, are under the influence of the central nervous system, particularly the centres of the medulla. An extremely rare complication of diabetes is the inflammation of the larynx resulting in abscess formation, the "furunculosis laryngis diabetica." The author believes that these cases are caused by some chemical poison. Considerable stress is placed upon the necessity of a specialist to have a general medical knowledge, because every possible etiological factor should be taken into consideration.

The Use of the Tuning Fork as a Test for Diseases of the Maxillary Antrum.

D. C. KUYK. *Laryngoscope, February, 1901.*

The author mentions the fact that most of the methods of examination of the maxillary antrum are unsatisfactory. Even exploratory puncture through the nasal wall, owing to the bony formation of the wall or the location of the antrum, which varies so frequently, will fail at times. Transillumination sometimes gives a shadow on both sides. The author's test is with the tuning fork, placed against the antrum and first and second molar teeth. If the antra are free and clear, the tuning fork will be heard with equal distinctness and for a like duration over each side and in either location. If one antrum contains fluid, the fork will not be heard so distinctly and perhaps not at all on that side, but if the opposite antrum is free the patient quickly answers in the affirmative. The same test can be employed to determine diseased conditions of the other accessory cavities as well as of the mastoid.

Notes on Turbinotomy.

CHEVALIER JACKSON. *Laryngoscope, December, 1900.*

The author recommends for the permanent reduction of soft hypertrophies of the turbinates, a removal of the extreme edge of the bone with the soft parts. The resulting cicatrix is adherent to the bone, and during acute turgescence this cicatrix will be at the bottom of a groove, allowing a normal range of swelling on each side while preventing complete stenosis. Any operation including only soft tissues, he claims, will only give temporary relief. When obstruction of the normal tear drainage is declared by the oculist not to be at the eye end of the duct, nothing will so frequently relieve as the clipping of the turbinated bodies, including a fringe of bone. He recommends this even in cases where on inspection the turbinated bones seem normal. A special scissors has been devised by the author for doing this operation, with which it can be done very rapidly. He warns against the removal of too much of the turbinate, so that the warming, moistening and filtering function of the nose be not interfered with.

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Original Communications

ON THE VALUE TO THE PHYSICIAN OF MODERN METHODS OF DIAGNOSIS.*

BY HENRY L. ELSNER, M. D,
Syracuse, N. Y.

On this occasion I wish once more to express to you my thorough appreciation of the great honor which my election to the presidency of the Medical Society of the State of New York implied and to thank you heartily for this proud distinction.

The development of medical science has been so rapid that to those who have been in practice twenty or even fifteen years, who have not kept pace with the advances and the scientific movement, the language of the medicine of to-day is almost unintelligible. Indeed, medicine has been metamorphosed from an art into a science, to the everlasting credit of an unselfish profession, and to the benefit of mankind.

Rational medicine requires for its successful practice a scientific fundament. It is not long since our methods of investigation were crude and faulty; instruments of precision were wanting and the many refinements of diagnosis which we now possess were either undiscovered or the few in use were to be found only in the larger universities.

It gradually became evident, however, that to complete the education of the physician it was necessary to establish the laboratory (that true workshop of the physician) where he might study the conditions which exist in health; learn to appreciate the changes wrought by disease; gather lessons from the thorough study of physiological chemistry, and record many facts concerning the modification of perverted functions by the application of remedies. Without these object lessons many of the astounding advances of modern medicine could not have been made.

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*President's address, delivered at the ninety-sixth meeting of the Medical Society of the State of New York, held in Albany, January 28, 29 and 30, 1902.

By the aid of these, medicine has made greater progress during the past three decades than had previously been made in as many centuries.

The scientist must of necessity be a revolutionist. All things he must prove for himself. Richet has truly said, "By experiment and by science, medicine is compelled to march forward." This is as true to-day as it was in the time of Harvey and should prompt us to encourage in all fields of medicine, wherever permissible, original painstaking experiment and the conscientious application of positive conclusion to the recognition and treatment of disease.

Unalterable and earnest in the belief that modern methods of diagnosis have proven themselves of the greatest advantage to the physician in the study of disease and with a conviction deeply grounded, much against my will, that only a minority of the medical profession has adopted these refinements, by the use of which medicine in its science, becomes more and more exact, I have concluded on this occasion to address you "On the Value to the Physician of Modern Methods of Diagnosis."

The profession, as organized in our society, has always represented a progressive element in medicine; has demonstrated its willingness to enlarge and enrich its field of usefulness and influence; has striven to disseminate knowledge far beyond the limits of our own State and it is because of this encouraging past and the promising present which cements the past and the future, that I bring this subject to your notice, that our influence may be exerted in behalf of methods in diagnosis which rest on a scientific foundation, and which prove, when impartially reviewed, to be of inestimable value to the suffering.

We are not to rest content with the uncertain methods of our forefathers, which seemed to them, as they seem to many to-day, to unearth the entire truth, but with Lessing we must proclaim, "Not the bare truth which everybody possesses, or thinks he possesses, but the earnest endeavor which he has made to understand the whole truth—to get at the foundation of it—makes the worth of a man. For it is not through its possession, but rather through the search for the truth that his powers are enlarged, which alone make for his growth toward perfection. Possession makes him quiet, indolent, proud." Ours is a profession which can ill afford to be satisfied with possession which makes it "innocuous and proud." Ours is the task of blasting in the quarries of the unknown, where are hidden innumerable precious truths awaiting development. Thus may our art "gain the reach and certitude of sway over disease which we all yearn for it to possess."

Sir Michael Foster has recently said, "The phenomena of disease, being phenomena of living beings, present themselves in most, if not all cases, as problems, as mixed problems of physics, chemistry, and biology, to be grappled with by the doctor as they are grappled with by the physicist, the chemist, and the biologist." To this quotation, I add the words of our own philosopher and pathologist Welsh, recently given to the profession at the Virchow dinner: "General pathology must call to its service not only morbid anatomy, but also experiment and clinical medicine; nor is practical medicine to be founded upon pathological anatomy and general pathology alone, important as they are to the physician in many ways. Clinical medicine, as well as every other department of medicine, must be investigated by itself, deriving, as should every science, all the aid it can from allied sciences."

Our appreciation of clinical diagnosis by means of microscopic and chemical methods is well demonstrated by the hearty welcome with which the original work of von Jaksch and later the volume of Simon's, both on clinical diagnosis based on newer methods, were received by the progressive internists. We were eager for more exact knowledge—for science to aid us in our art. The statement by Simon that "Diagnosis is now the password in Medical Science," needs to be realized by many who continue satisfied with the uncertain methods of the past. The value of the application of the knowledge of physiological chemistry to the recognition of disease is splendidly illustrated by the certainty with which many diseases of the stomach and intestines are thereby recognized. Here I may be permitted to quote from a former address.

"With the discovery of free hydrochloric acid in the gastric mucus by Prout in 1824, and the demonstration of pepsin by Schwann in 1836, the first data for an ultimate and more thorough understanding of the physiological and chemical functions of the stomach were given. These discoveries, with those of Reaumur and Spallanzani, formed the foundation upon which ultimate gastric pathology was to rest, and upon which a structure has been erected to which modern medicine points with just pride.

"The way to pathology is through physiology," says Ewald, and the more we deal with this subject, the firmer is the truth of that statement impressed upon our minds. It is not the study of the peptonizing function alone which claims our attention, but it is the proper understanding of the entire work which is performed in this human laboratory, including a large part of the alimentary canal, and a thorough appreciation of the relations which each function bears to the others, that makes a rational anatomical diagnosis and indications for treatment possible and in many cases positive."

When Kussmaul in 1869 first used the stomach pump and tube in the treatment of disease, Liebermeister correctly prophesied that this manœuvre would probably mark an epoch in gastric pathology and therapy. When Leube in 1871 first recommended the stomach tube for purposes of diagnosis, he cleared the way for the ready diagnosis of stomach disease. Without the method evolved from Leube's original innovation, gastric diagnosis would soon fall and the treatment of stomach disease would once more become as unscientific as of yore.

The diagnostic value of the absence or diminution of free HCl in the stomach secretion, associated more particularly with pyloric cancer and ultimate dilatation, was first systematically investigated by R. von den Velden at Kussmaul's clinic in Strassburg. Golding Bird called attention to this fact in 1842 and it seems strange that this information was ignored by the profession for diagnostic purposes during so many years.

I found in my investigations of gastric cancer, reported in 1893, in one hundred and twenty tests, free HCl absent in 92, 7%, and present, (as a rule feebly) in 7.3%; and from a larger number of cases since studied, material change in these figures is not justified.

The diagnosis of cancer of the stomach from the absence or presence of free HCl *alone* ought never to be made, but associated with other symptoms leaning toward malignancy, we may assume with considerable certainty that the demonstration of the presence of HCl argues against the existence of cancer. The cases according to Ewald, "In which there is a positive reaction to the carefully applied tests are so rare, that they have very little bearing on the question." Since the introduction of these chemical tests for the recognition of diseases of the stomach, we have learned much which is of value relative to blood changes in these and other diseases. Thus in some cases of latent or progressive cancer of the stomach, atrophy of the gastric follicles and pernicious anæmia or other diseases associated with cachexia, stomach symptoms and blood changes, the combined results of gastric tests with the blood examinations, *repeatedly made,* give facts which we must possess to clear the horizon and justify positive diagnosis.

Henry's observation showing that the reduction of red blood corpuscles in cancer of the stomach does not keep pace with the cachexia; while in pernicious anæmia the cachexia does not keep pace with the reduction of red blood corpuscles, has been corroborated many times and is of great diagnostic value.

For the surgeon the knowledge gained by our new methods in stomach disease is strongly confirmatory. With a growing experience we are justified in entertaining for the future a well founded hope of recognizing malignant disease of the stomach early, when as the surgeon's helpmates we shall save or prolong many lives in comparative comfort.

By these methods of diagnosis the dietetics and therapeutics of gastro-intestinal diseases have been placed upon a more solid and scientific basis.

The satisfaction experienced by the physician in outlining a diet which he knows will positively find a suitable reception and ultimate assimilation must be sufficient recompense for the time occupied in studying the individual case.

Time will not permit the rehearsal of profitable experiences in this field. The recognition by our positive methods of quantitative and qualitative changes in the secretory function of the stomach has ended the suffering of many chronic invalids. The recognition of hyper-acidity and hyper-secretion has relieved many unfortunate sufferers from uncontrollable pain, waning strength, and wasting muscle, with rebellious stomach symptoms. Scientific diagnosis in these cases, followed by rational treatment, yields brilliant results. No physician can do justice to himself or to his charge, who is unable when the case demands it, to apply the simple methods which without great labor or loss of time make clear to him the working ability of the stomach in its secretory, motor and absorptive parts.

No one who has worked in the broad field of medicine, unless finally biased by narrow and special practice, contends that in all diseases of the stomach we need the test meal and the knowledge gained by its chemical examination, for the recognition of disease. We shall always meet a large number of cases, however, with uncertain symptoms, with strong suspicions of disturbed gastric function; cases with features of malignancy, though without positive physical signs; cases in which the question of the benign or the malignant nature of the underlying process needs prompt recognition, in which we shall be able to add a strong link by the correct interpretation of data gained by methods founded upon our knowledge of physiological chemistry.

In this connection I must call your attention to the great value of inflation of the stomach with air, or carbonic acid gas. In office practice we often gain knowledge of the relative size and position of the stomach; its relation to the neighboring organs; of its walls, as well as the resistance of these, by the administration of a Seidlitz power, each part separately, to allow the escape of gas in the stomach to distend it. More satisfactory, in cases where this manœuvre fails, is the inflation with air through the stomach tube. The failure to inflate the stomach by these means, with associated symptoms of malignancy, the absence of tumor and free HCl, would lead to a suspicion of infiltrating disease of the stomach wall. In some cases adhesions to the surrounding organs have thus been recognized, while in a case of ulcerating cancer, it was found that the adherent transverse colon was readily distended with the tube in the stomach, because of communication which existed between these viscera as the result of ulcerative changes.

The distension of the large intestine with air is frequently of great value in the localization of abdominal disease; particularly useful in the recognition of renal growths in which the distended gut is found anterior to the growth. These methods are too rarely used and will not be discarded when fairly tested.

The precipitation by centrifugal force of cellular elements from the stomach contents with microscopic and bacteriologic examinations will often prove of great therapeutic and diagnostic value

In connection with the diagnosis of syphilitic diseases of the stomach, a fact which has been too often overlooked and which is rarely mentioned, is the tolerance of the iodides in specific cases of ulcer and gastritis and the ready relief experienced. Under ordinary circumstances the symptoms of these patients are almost immediately aggravated.

The application of centrifugal force to clinical medicine is of recent date. Steinbeck of Stockholm, a medical student, first described the use of the centrifuge for the precipitation of sediments from urine, sputum and other pathological fluids. Litten at the Congress of Internal Medicine in 1891 made a strong argument in favor of its use; von Jaksch described the positive advantage of the combination of the centrifuge and Biedert's method in cases where he was unable to find bacilli after patient search. Freeborn of New York in 1891 demonstrated a home made machine capable of nine hundred and fifty revolutions per minute. Gerster and Sondern followed with contributions on this subject and in 1894 Elsner and Hawley, after a considerable experience with the instrument, dilated on the clinical value of the centrifuge.

Experience with the centrifuge has proven it to be of inestimable value. It is one of the few aids to diagnosis which has been generally adopted, and to-day there is practically no laboratory or hospital in which it is not found.

The time gained by centrifugalizing urine is of great advantage, where an unaltered urine is desired (fermentation not having taken place); the early precipitate shows epithelial casts and other structures before changes in shape, size and contour occur, and these without bacterial contamination. By the use of the centrifuge, insoluble and suspended elements are precipitated.

Blood may be precipitated when present in such small proportion that no other method would show it. It is invaluable to the insurance examiner in aiding to discover the underlying condition in cases of so called transitory, cyclic or puzzling permanent albuminuria. It is our most reliable aid in detecting early primary genito-urinary tuberculosis. It precipitates small quantities of albumen with picric acid and makes possible the immediate application of Esbach's test, thus saving twenty-four hours.

The bacteriological examination of serous exudates and other pathological fluids is expedited by its use as is also the examination of sputum for tubercle bacilli where they are present in small numbers. The writer found that in twenty-one per cent of urine analyses, the centrifuge yielded results which led to greater accuracy in diagnosis than could have been otherwise obtained.

In doubtful cases of renal calculosis, the methods of Kelly, including the distension of the kidney and its pelvis with water, after his improved manœuvre, gives information which cannot be obtained without exploratory operation. The added evidence furnished by the X-ray examination and the skiagram will often furnish proof which justifies accurate and scientific diagnoses, though the clinical history may be meagre and unsatisfactory. These and similar methods, with painstaking bedside study, may arouse suspicions which must finally lead to positive conclusions.

The birth of a new science, hæmatology, founded upon accurately interpreted data, has added great pleasure and material profit to the study of many conditions, formerly puzzling in their differentiation, and unsatisfactory in their treatment. No diagnostic methods in medicine give more conclusive evidence or offer more uncontrovertible pictures than are revealed by those which we to-day include in our examinations of the blood. When I hold that these methods have not only been profitable, but have given the diagnostician genuine pleasure, I speak without exaggeration.

It is not the object of the evenly balanced physician to replace the knowledge gained at the bedside by laboratory findings, or to limit diagnosis by considering only facts made positive by microscopic examination and staining of the blood, but to *add* the exact knowledge which was unattainable before the advent of haematology. Let him who has never relied upon blood examination for assistance in diagnosis, work but a short time in this field, and he will unfold a chapter to which he will revert for information; upon which he will learn to place great reliance as he becomes more and more conversant and expert in technique.

Blood examination means much more than would appear on the surface to those who are unacquainted with hæmatological methods. From a narrow conception of the true significance of the anæmias, we have broadened the field until we hold without fear of successful contradiction, that the positive diagnosis of the simplest form cannot be made without the aid of data obtainable by blood examination.

Clinically the picture of a grave anæmia, non-malignant, is often identical with that of pernicious anæmia. Pernicious anæmia may in some of its stages, simulate exactly in subjective symptoms and in many of its objective features, a true luekæmia, while Hodgkin's disease may present symptoms not unlike malignant disease, lymphatic or mixed luekæmia. The missing link in the differential diagnosis can only be furnished by laboratory examination of the blood.

Without the quantitative test for hæmaglobin, we would often fail in our differentiation of the anæmias, while our treatment would continue to be irrational.

Differential blood counts and staining methods give data which justify the positive differentiation of the various forms of anæmia, known as leukæmia. Thus we have learned to recognize the pathognomonic lymphocyte of lymphatic leukæmia and the myelocyte of the myelogenous or spleno-myelogenous variety of the disease.

Who shall be able to compute for the profession the gain which has accrued from our ability to diagnose malaria from the presence in the blood of its protozoon? Our ready method of demonstrating the organism of malaria has made positive the nature of many most difficult and troublesome conditions. Add to this the readiness with which after the method of Sittman we recognize bacterial contamination of the blood and you have included methods by which medicine has become more exact and satisfactory. In many epidemics we meet continued fevers without characteristic symptoms of typhoid, which can only be diagnosticated by the systematic use of the Widal agglutination test. The percentage of failures is relatively small, while the positive information, so much needed in doubtful cases, is often though not always, obtained. Absence of leucocytosis or a diminution below the normal of leucocytes with fever, with the absence of other objective features, has often justified the diagnosis of typhoid before a positive Widal test was obtainable. The presence of leucocytosis with chills and fever, or with continued fever, with or without local symptoms, has often led to conclusions which have been life saving in their effect. Sudden and persistent leucocytosis in typhoid fever and in other conditions not usually associated with polymorphonuclear leucocytic increase points to complications the nature of which may be surmised with great certainty when the result of the blood examination is considered with the associated subjective and objective symptoms.

The revelations of a leucocyte count in a case recently seen where irregular fever and chills followed dysentery, without more than a slight tenderness in the right hypochondrium with slightly enlarged liver, furnished the information which made pus accumulation probable and justified exploration. An abcess of the liver was found.

Puzzling cases in which tuberculous diseases require differentiation are often cleared by a count of leucocytes. This method of differentiation is one which we will often use and unless we have mixed infection with tuberculosis the absence of leucocytosis may be considered an important factor in diagnosis.

Thus in tubercular peritonitis the leucocyte count is not materially increased. Leucocytosis with brain symptoms argues in favor of meningitis, non-tubercular.

Much has been written recently on the condition of the blood in surgical disease, particularly in appendicitis. In connection with this disease we must not fail to give an existing leucocytosis the prominence which it deserves. To depend upon the results of the blood examination without giving to other symptoms in a suspected case of appendicitis their proper import, would lead to unpardonable error.

The diagnosis of Trichina Spiralis may and has been corroborated in doubtful cases by the presence of eosinophilia. Eosinophilic increase may become an aid in the recognition of scarlet fever where other data are wanting or meagre.

The detection of indican with or without leucocytosis, gives information of value in occasional doubtful intestinal and abdominal diseases.

It has been said that the time occupied in making blood examinations is out of all proportion to the knowledge acquired, an unjust and untrue charge. To gain exact information is our aim at any expense of time, but fortunately a thorough blood examination can be completed in less than one and one-half hours, while in the majority of cases with our newer methods and better technique, one-half that time will suffice to give the information needed. The successful and busy physician ought to be willing to relegate this work to those less occupied; he will always be able to find trained assistants to complete this work for him. The simple and rapid methods of staining malarial and other blood films without fixation after the method of Romanowsky and with the Jenner panoptic stain, reduce materially the time necessary for gaining satisfactory results.

The bacteriological diagnosis of certain diseases has become a matter of routine with the scientific worker. To the bacteriologist we look for the solution of many important problems in the prevention and recognition of disease. The number of lives annually saved by the application of bacteriologic methods to the diagnosis of disease cannot be estimated.

When we consider the advantage of bacteriological examination of the blood, including culture experiments, we are led into a broad field in which the practicing physician cannot do more than accept the knowledge gained from the well equipped laboratory over which special workers must always preside.

We have not received the encouragement which we deserve from the State in our efforts to prevent and diagnose disease. The policy of the State in this direction has been niggardly and short-sighted. Every section of the State should have a well-equipped laboratory where thorough bacteriological work is done to give the aid to the profession which for public safety is often promptly needed, and where many difficult questions can be definitely settled. Thus I have found during the past year counties in which there were no facilities for making cultures in cases of diphtheria, or for the application of bacteriological methods to the recognition or treatment of disease. Such faulty policy can only end in disaster and useless sacrifice of precious lives. I fear that many in our profession, as well as our legislators, have failed to appreciate what a leading part the microscope and bacteriology play, for an improved diagnosis is but a small portion of the gain to be derived from a scientific study of the causes of disease. "A new direction has been given to treatment."

The enormous advantages of serum diagnosis were well illustrated during the Spanish War, when the fevers prevalent among the American soldiers in Cuba and Porto Rico, were claiming so many victims, and the differential diagnosis of typhoid, malaria and the dysenteries was of such transcendent importance. The blood of ninety-five per cent of the typhoids showed a positive serum reaction, the malarias were easily recognized by the characteristic protozoon, while the dysenteries gave no positive blood picture.

Cases of typhoid associated with jaundice are mentioned by Cabot in which the diagnostic of yellow fever was eliminated by the immediate typhoid serum reaction. Cabot says, and it is true of serum diagnosis, "The whole process can easily and safely be carried out by the physician in his office without any laboratory facilities and without half the skill or labor necessary to examine the urinary sediments."

Much has been written during the past few years on the advantage of lumbar puncture in doubtful cases of brain disease, particularly in tuberculous meningitis. Microscopic examination of the fluid has often been negative. Langer sought to aid diagnosis by incubating the fluid withdrawn, but the patients died as a rule, before conclusions were reached. For animal experimentation large quantities of fluid are required, even for intraperitoneal injection, and positive results are too long postponed. It is doubtful whether in case of failure to demonstrate microscopically the presence of tuberculosis bacilli in the fluid withdrawn, we shall succeed by experiment of any kind in establishing a diagnosis with sufficient rapidity to be of any value to the physician. It has been found that sugar is usually present in the meningeal fluid in cases of brain tumor, while in tubercular meningitis, it is absent as a rule. It will be preferable to depend on the ophthalmoscope in these cases without the puncture. Lumbar puncture in the hands of the inexperienced or uncleanly is not without its danger. It is not at all likely that it will ever be adopted by the general profession for diagnostic purposes; indeed in the majority of cases we are not dependent upon the information which it has been supposed by some to convey.

In occasional cases the diagnosis of malignant disease may be strengthened by the examination of serous effusions and tissue removed after some one of the improved methods. Cancer cells are no longer considered characteristic. Dock has shown that similar cells are found in cancerous, tuberculous and other effusions. The presence of many cells in serous effusions showing mitosis, either typical or atypical in type, is strongly suggestive of malignant growth. Centrifugalized specimens may however, be examined for evidences of mitosis with negative result. The specific gravity of cancerous effusion is low, tuberculous higher, varying between 1.020 and 1.028. The presence of a large amount of blood has in several cases of cancerous effusions raised the specific gravity to 1.020 or even 1.022.

Simon says, "Clinically, it is frequently difficult to distinguish between transudates and exudates, and large ovarian, pancreatic, and hydatid cysts, as well as cystic kidneys, may at times be mistaken for ascites. In such cases a careful chemical and microscopic examination of the fluid in question may be of decided value. Very frequently, moreover, it is possible only in this manner to determine the true nature of the disease, and the importance of freely using the trocar and the aspirating-needle in diagnosis cannot be too strongly advocated."

The use of the Roentgen rays in medicine seems almost uncanny. It is doubtful whether with our present technique we gain many pictures which justify positive conclusions in the study of internal diseases. The greater reliance must still be placed on associated physical signs and subjective symptoms. Certain it is that a correct interpretation of the skiagram requires great experience and the production of the shadow must always be relegated to those whose practices are limited and who have infinite time and patience to give to this work. I know of no field in which greater perseverance and attention to detail are needed. We have received valuable aid from the X-ray examinations in diseases of the lungs and heart, especially where an accurate knowledge as to size and movement are needed. The diagnosis of intra-thoracic growths and anuerisms has been strengthened by the fluoroscope and skiagram, without ignoring associated clinical manifestations. This method of inspection has been of greater advantage to the surgeon than to the physician, but to deny its value in medicine, would be absurd and unjust.

Changes in the bone, about the joints, and gouty deposits have been satisfactorily demonstrated. Dense foreign bodies in internal organs, such as calculi, are very often demonstrated by the Roentgen rays. Porous calculi have escaped detection in several cases examined by this method. If the negative picture had been depended upon, one case recently seen, in which there were over 500 calculi in the gall bladder, would have remained unoperated.

Skiagraphy may be said to be in its infancy, but we are encouraged by the labors of Williams, Leonard, Stubbert and others, to hope for great assistance in the future from the use of the Roentgen rays in medicine.

The recent introduction of an apparatus for giving stereoscopic vision by the X-ray is believed by some to add materially to the practical value in medicine and surgery of this method of examination. The usual silhouette effect is replaced by a picture which stands out distinctly, showing the space relations of the object viewed.

We are not to be discouraged by the fact that radiographs which seem unsatisfactory to the majority of ordinary observers, are readily interpreted by the expert, for in cases where we must place considerable dependence upon these pictures as giving evidence of pathologic change, we shall give the opinion of the X-ray expert the importance which it deserves, remembering always that we have received but a link and to strengthen the chain requires the thorough application of other confirmatory methods.

The scientific diagnosis of many diseases of the nervous system has been materially aided by our knowledge of the electrical reactions of the different tissues in health and disease. To those only who have a thorough conception of the newer anatomy and pathology of the nervous system, will electricity give any assistance in diagnosis. Here, as in the localization of central and peripheral nervous lesions, physiological knowledge remains the ground-work upon which diagnosis must be builded.

Bennett has, after patient clinical observation in this field of diagnosis, demonstrated the truth of the statement that "Like all of our methods of physical diagnosis, electricity must not be depended upon alone as the sole means by which we are to arrive at a just conclusion in investigating the nature of disease. It is only one of the aids we employ, but which in conjunction with other facts and observations, is a most powerful auxiliary." There are a sufficient number of instances in which electricity offers data for diagnosis which cannot be obtained from any other source and for this reason, the general practitioner, as well as the specialist, must acquaint himself with the method of its application, and must possess the underlying knowledge which makes rational conclusion possible. Though electricity may not be absolutely necessary for the diagnosis of the various paralyses, it remains the means of giving it "a facility and precision which has become indispensible to the neurologist."

Electric reactions, associated with a thorough study of the deep and superficial reflexes, lead to the interpretation of phenomena upon which depend localization and diagnosis in many puzzling conditions.

An instrument of precision too little employed by the general practitioners is the ophthalmoscope, for the introduction of which the memory of von Helmholz will always be revered. If the information obtained from its use were limited to the eye, we would not consider its value on this occasion; it gives information regarding the existence and nature of pathologic conditions elsewhere than in the eye, which is often obtainable in no other way.

Gowers in his classic work on Medical Ophthalmoscopy says: "This information depends upon the circumstances that we have under observation, (1) the termination of an artery and the commencement of a vein, with blood circulating in each; (2) the termination of a nerve, which, from its close proximity to the brain, and from other circumstances, undergoes significant changes in various diseases of the brain, and in affections of other parts of the nervous system; (3) a nervous structure, the retina, and a vascular structure, the choroid, which also suffer in a peculiar way in many general diseases."

We do not contend that the general practitioner must of necessity become an expert in the use of the ophthalmoscope, but we believe that he must depend upon its revelations, if he would early recognize certain diseases of the brain, arterial degeneration, and renal complications. Time does not allow on this occasion of an extensive argument in favor of the more frequent use of the ophthalmoscope by the physician; many cases might be taken from the records of those who have learned to use this instrument in general medical practice, which justify the great satisfaction with which its use is continued. We have only to refer to the significance of optic neuritis with brain symptoms, however vague, the presence of choroidal tuberculosis in advance of other positive symptoms, the presence of albuminuric retinitis in cases of non-albuminuric nephritis and the presence of retinitis and changed vessels in comparatively young subjects with transitory albuminuria and tube casts, to show the value of the ophthalmoscope to the every-day doctor.

Those who for any reason are unable to refer these cases to special workers in this field should educate themselves by postgraduate study in the use of the ophthalmoscope for the recognition of the grosser pathologic changes in the eye.

In the preparation of this address, the fact is appreciated that reference has been made only to a few of the newer methods upon which the profession is to-day leaning as aids in diagnosis. Limited time does not permit the consideration of many of the methods which are of undoubted value as adjuvants in the recognition of disease. What I wish to impress is the importance of working systematically and scientifically, however busy we may be in our practices.

"Qui bene diagnoscit, bene medebitur."

It is no secret that the charge has been made that too many patients in this country are often ignorantly and incompetently treated, and our medical schools and system of medical education are held responsible for this state of affairs. We must admit that we too often fail to stimulate the "Scientific sense;" men are not educated to work systematically. Raise as high as you can the requirements for admission into the profession; gain the best timber possible, which will always include a majority, receptive and earnest, and these serious charges will be less frequently made. We shall never be able to impress all with the enormous responsibility under which many almost stagger in medicine.

Many agencies have influenced American medicine. Whether these originated from communion with Louis, Laennec, Trousseau or Charcot in France, whether they were led by the Berlin school, the immortal Schoenlein, Traube or Virchow, and their followers; were founded upon the methods of the Vienna school from which radiated the benign influence of Bamberger, Duschek, Skoda and a score of others, or were the products of our own enlightened masters of medicine—and we have had many—each had a scientific fundament and each vied with the other in unearthing new truths to be applied to the recognition of disease and its treatment.

The Clinical Medicine of the past may with reason be compared with a rude and hardy plant, now grown in spite of neglect, to a colossal tree with innumerable branches, richly laden with fruit its roots reaching far into the fertile soil for nutriment. This soil must be nurtured and sustained—else the tree will fade and die. The new must become an integral part of our being, the new of to-day is often enriched by the new of yesterday. True it is that "Stagnation is something more than death." The physician of to-day has countless advantages over his forebears; his training makes him more enlightened; he has been forced to equip himself for his life's work. The advantages offered for the thorough and scientific study of disease were never before equalled in this or any other country.

A generous public, by the free giving of material aid, encourages the solution of scientific problems related to disease and its prevention by scientific methods. In return, it has a right to demand the product of our best, our most conscientious efforts. Are we not also prompted by selfish motives to work scientifically? Our only safe guard against quackery is "Continued recurrence to the scientific basis on which the practice of medicine rests."

We must gain exact knowledge in order to derive satisfaction from our practice. Even with increasing knowledge the layman's demands may in many cases be far beyond our ability to supply.

We can ill afford to encourage iconoclasts in medicine. Fortunate for us that we have no Paracelsus—a badly balanced genius—a dangerous revolutionist at work to reject all that has been taught because of a pronounced taste for a single science. There will always be extremists against whom the evenly balanced must array themselves. The application of modern methods in the diagnosis of disease must always remain supplementary to bedside study, but no one who has taken advantage of laboratory methods will deny that much may be learned by laboratory study, of the greatest scientific and practical importance, without which we would be poor indeed. The practical diagnostician will not be narrowed by the association of laboratory methods with clinical data; he will not become theoretical, but more practical; he will become a more acute and cautious observer because of his training; he will "Acquire knowledge at first hand" and make fewer hurried diagnoses; he will be prompted to do more original work.

There are those, who, in spite of the fact that we are encouraged in all educational matters to develop the observant sense, continue to decry all laboratory and scientific methods. The scientist is charged with being a dreamer and impractical. "There are some indeed, who would tell you that the scientific man is ill-fated for anything but science; that he cannot be punctual, business-like, a plain speaker, pious, or I know not what else." "It would be difficult to find greater nonsense in any of the books of journals on a modern book-stall." "There is nothing that a man may not be at the same time that he is scientific." (Paget.)

Failures in practice are by no means limited to the scientific. This fact requires no extended argument. Did Schoenlein's practical work in Berlin suffer because of his scientific attainments or because he became the pioneer in Germany in the introduction of physiological methods, the microscope, and chemical analysis, in the study of his clinical material?

Haller had made the attempt one hundred years before but the scientific fundament supplied by pathological anatomy was wanting. Hippocrates auscultated, and one hundred years before Lannec, Auenbrugger attempted to introduce percussion as a diagnostic agent. These attempts bore no fruit; pathological anatomy was needed to make clear the meaning of physical signs. It is by no means to be considered an accident that among the greatest advances in medicine made during the century just closed, the introduction of pathological anatomy and auscultation into the clinic, both were introduced by the same clear mind, Lænnec. He is one of the greatest physicians in history. Allbutt has said "He deserves to stand by the side of Hippocrates, Galen, Harvey and Sydenham. His work was a revelation of the morbid anatomy of the internal organs during the life of the patient."

The physician who is truly successful in practice must depend in a great degree upon the good opinion of his fellow practitioners. Laymen have not the positive means of gauging our ability which those possess who are fitted to judge. Nothing commends itself to the professional mind as does the thorough scientific investigation of individual cases. Certainly there are among those who have no medical education some who judge reasonably of the physician's worth, but the number of these is few. Of the majority, we may say they are the most ignorant who are most positive and loudest in their praise or denunciation, and these are often the most influential.

Herbert Spencer has well said, "Had we time to master all subjects, we need not be particular."

"Could a man be secure
That his days would endure
As of old, for a thousand long years,
What things might he know!
What deeds might he do!
And all without hurry or care."

Bearing in mind our limited time for acquisition and action, the question which is of such transcendent moment is whether the methods recently introduced are of sufficient benefit in the study of disease to claim our attention and time. We must determine in other words, "The relative values of knowledge." If we consider the relative worth of these methods to the clinician from an unbiased standpoint, we must conclude in favor of the adequateness of the advantages. There is certainly a proportion between the required labor and the probable benefit. The young man needs the knowledge and training which the thorough study of disease develops while those who have grown old in the treadmill must take advantage of modern methods and ideas to retain their standing in the profession.

Sir James Paget in his memoirs recently published, writing on the "Ways into Practice," and the "Various Ways out of Practice," speaks candidly on the conditions which effect success and invite retrogression. Between the lines one can read the thoughts of this clear-minded gentleman physician and the appreciation by him of the importance to the honest worker of receiving, after a sufficient period of probation, the methods which were included in the armamentarium of his juniors and pupils.

To those who are practicing at a distance from centres where men are devoting themselves to the accurate methods in medicine, a word of warning may not be misplaced at this time. Your influence will not endure if you persist in ignoring methods which have been tried and found useful. You will finally hold only a remnant of your public clientèle. In spite of the fact that the public has never been more credulous or more ready to encourage quackery, the services demanded from the physician were never before expected to be of so high an order. His search must always be after the end of science. "The real and legitimate goal of all sciences is the endowment of human life with new inventions and riches." The individual has a right to demand of his physician accurate recording of all facts relating to his condition with a painstaking investigation of every detail which the case offers, by *every method needed for accurate observation and ultimate diagnosis.* Believing that modern methods of diagnosis lead to trustworthy interpretation of symptoms with a firm belief in the superior ability of those who have adopted these methods, the lay world is fast removing its former prejudices against hospitals where medicine and surgery are practiced rationally. The consulting rooms of those who are known to employ the most thorough methods are filled with all classes of clients. There is a feeling abroad which calls for thoroughness from those charged with the recognition and treatment of disease.

The period has not yet been reached when we can truthfully deny that our art is in advance of scientific direction and explanation. Now as always we need common sense, as well as knowledge, with ready decision and resourcefulness. This no college or teacher can supply. We must never allow our critical faculties to exceed the practical. It has been truly said that "Practice without scientific re-edification soon degenerates into stereotyped and sterile routine." No amount of extra labor bestowed on the study of disease will prove irksome to him who possesses the true scientific spirit; on the other hand, the consciousness of a duty thoroughly and consistently performed, will prove an ample reward.

Out of the clinical laboratory "The new medicine is to come—the medicine which penetrating into the intimate processes of Nature, learns to turn Nature to her own correction—the clinical laboratory is to be the scene of the study of the origins of disease."

"A life full of Work and Labor is no burden, but a Boon, an Enjoyment." This served as the text of Virchow's original thesis. His life has been sweetened by the conscientious and scientific application of his great powers, and it is this spirit which will continue to inspire the physician.

The moral force of scientific methods in medicine is the greatest factor in modern medical practice.

TROPICAL DISEASES AS OBSERVED IN THE PHILIPPINES.*

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Concluded from January ANNALS, *page 23.*)

Ankylostomum Duodenale

In July last year I went to the hospital in Manila with diarrhoea and fever, and while there saw many cases of dysentery, one case of ankylostomiasis, and several due to benign parasites. The benign cases were those of tricomonas and circumonas intestinalis. These are said to be benign, but when they occur in such numbers as were reported it was thought very probable that they might cause diarrhoea. This parasite, ankylostomum duodenale, causes a profound anaemia, called ankylostomiasis. It is known by various names, in the French West Indies as cachexia aqueuse, in Colombia as tuntun; in Europe it is known as miner's anaemia, in Egypt as Egyptian chlorosis. The normal habitat of this parasite is in the small intestine of man, particularly the jejunum, rarely lower in the tract, sometimes it is found in the stomach. Its action is purely mechanical, it is a blood sucker. It attaches itself to the mucous membrane of the gut and thus obtains a plentiful supply of blood for its nourishment, absorbing only the plasma, and passing the red corpuscles through its alimentary tract unchanged. It shifts its hold from time to time, and the wounds then continue to ooze blood. There are generally three females to one male ankylostomum. The male measures six to eleven mm. in length by four to five mm. in breadth. The female measures seven to fifteen mm. in length by one mm. in breadth. Both sexes are cylindrical in form and white in color when alive, gray when dead. In both sexes the posterior end is the broadest, and the body then tapers forward to a narrow neck ending in a powerfully armed distinct mouth, the margin of which has four strong claw like hooks. The female produces a large and never ending stream of eggs, which pass out in the faeces. While in the body of man the development of the embryo does not advance very far, but on leaving the body it proceeds so rapidly that in one or two days the embryo is born. This organism is very active, devouring what organic matter it can find, and for a week growing very rapidly. During this time it moults twice. After the second time it passes into a larval state, in which it ceases to eat and its growth stops. In this state it may live for months moving about in water or in mud. It may enter the human body by the drinking water, or by earth on the hands of the person, or in some similar manner. When it gets into the body it moults again, and then acquires sexual characters and permanent form. The symptoms are progressive anaemia generally associated with dyspeptic troubles, but not causing a wasting of the body; serous effusions in different cavities may result in an unchecked case, also fatty degeneration of the heart. There may be dozens of ankylostoma in the intestines without causing any anaemia, or any symptoms whatever; in fact grave symptoms in this disease are the exception. In the tropics many of the people are half starved, or live on innutritious food, they are therefore prone to dyspeptic disorders. In these cases the addition of ankylostoma may prove serious, and especially where coolie or native labor is employed. One of the earlier symptoms of an ankylostomum invasion is pain or uneasiness in the epigastrium, increased by pressure, and somewhat relieved by the taking of food. The appetite is usually ravenous. The patient suffers from dyspeptic trouble, colic, borborygmus, and diarrhoea of imperfectly digested food. They also have a perverted appetite much the same as girls with chlorosis. They desire to eat such things as clay, earth, slate pencils and the like. The stools of the patients sometimes show a reddish tinge from the admixture of half digested blood. Some little fever, irregular and intermittent in type, is common. All the common symptoms of anaemia are present when the disease is well advanced: lassitude, breathlessness, tinnitus aurium, palpitation, vertigo, depression of spirits, etc.

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*Read at a meeting of the Dutchess County Medical Society, Vassar Brothers' Hospital, Poughkeepsie, N. Y., April 10, 1901.

In all cases of anaemia in the tropics it is well to examine the faeces microscopically in order to make a diagnosis early, for it is probable that ankylostoma are at the root of the mischief. Malarial cachexia and ankylostomum infection may occur at the same time, or one may be mistaken for the other. The microscope will settle the diagnosis. Some idea of the intensity of an ankylostomum infection may be formed from an examination of the eggs in a given quantity of faeces. According to Grassi and Parona 150 to 180 eggs per cubic centigramme indicate an infection of about 1,000 worms male and female. The bodies of the victims are not wasted, but may be more plump than usual, due to some general oedema. There may be effusions in different cavities. All the organs are anaemic. The heart is dilated and flabby, its muscular tissues being in a state of fatty degeneration. The liver and kidneys are also fatty. In a post mortem examination, if made soon after death, the ankylostoma may be found clinging by their mouths to the mucous membrane of the jejunum, duodenum and ileum. If the examination is delayed for some time after death the ankylostoma lose their hold and fall into the lumen of the gut. Some small extravasations of blood may be found in the mucous membrane and in the center the wound or bite.

Male fern was formerly the drug employed until the introduction of thymol. Thymol was the treatment used in the army. The patient was put on liquid diet for two or three days and the bowels freely opened. On the next day no food was allowed, and then usually twenty grains of well triturated thymol was given in capsules every hour for three hours or until sixty grains had been taken. If the bowels do not open spontaneously another aperient is given, usually a seidlitz powder, four or five hours after the last dose of thymol has been taken. One such course of treatment may be sufficient but it is well after a week has elapsed to again examine the faeces and if ova are present to repeat the treatment as before, once or oftener. Some precautions have to be observed in employing thymol. At times it gives rise to dizziness, syncope, etc., and therefore while taking the drug the patient should be compelled to lie down and to remain in this position for several hours after the last dose has been taken. Thymol is insoluble in water and there is very little danger under ordinary circumstanecs of the drug being absorbed in poisonous quantities. Alcohol, oils, turpentine, ether and glycerine are all solvents of thymol, and should any of these be taken while thymol is being exhibited there is grave danger of poisoning. The end of thymol poisoning is collapse and death. Because of this danger many prefer a less dangerous drug. Another reason against its use is that it is unpleasant to take, gives rise to burning sensations in the throat and stomach, giddiness, fainting and vomiting. Unless the patient is properly prepared by rest and proper feed thymol is dangerous. It should never be used in advanced cases. Male fern is given in the same dose as thymol, and the preparation of the patient for this drug is the same. Oil of peppermint, kerosene in thirty minim doses and guaiacol carbonate have been used. Diet is modified during convalescence and iron and arsenic given as blood restorers.

Prevention of the contamination of soil and water constitute the prophylaxis. Therefore the throwing of night soil about shacks, etc., should be prevented, and the faeces buried. Privy vaults may be provided, and so cemented as to be water tight. This is the Chinese method. If the ova are kept in pure faeces the embryo escapes, then unless supplied with fresh air and earth it soon dies. The thing to be avoided then is the mixture of fresh faeces with earth, and a guarding of the water supply from any possibility of fecal contamination. Drinking water should be boiled.

Teeth and Gums

There were many cases of sore gums and teeth resembling sprue, but not having any of the other symptoms. The men seemed to have considerable trouble with their teeth, whether due to carelessness or whether due to the kind of food I cannot say. Teeth decayed very rapidly, soon began to ache and many had to be extracted. I had a set of dental instruments, and often when I had time I put in some gutta percha fillings. The gums would get sore, become red and recede from the teeth, making the teeth sore, and the gums very sore. We used several things on them, Tr. myrrh, Listerine, chlorate of potassium, glycerine, etc., but what gave the best results was glycerite of tannic acid painted on two or three times daily. Perhaps some of these cases may have been sprue, for some of the patients had, besides the sore mouth, dyspeptic symptoms and diarrhoea.

DYSENTERY

This disease, as usual in army life, killed many more people than the bullets. It is the scourge of camp life. Most of the cases sent from Indan either died or were sent to the United States. Dysentery is a term applied to a disease whose principal pathological lesion is inflammation of the mucous membrane of the colon. It is very common in the tropics, and like malaria is endemic in certain spots. This disease is also said to be more prevalent in low lying districts, but there were plenty of cases at Indan. Malaria and dysentery may concur in the same individual and one seems to predispose to the other. We often got some result from a prescription of which quinine formed a part where other treatment had failed. The symptoms were inflammation of the great intestine, namely, griping, tenesmus, and the frequent passage of loose scanty muco-sanguineous stools, with great pain on going to stool, the stools smelling very badly. It may begin insidiously, or suddenly, or be grafted on to some other disorder. The symptoms varied according to the extent of lesion, the nearer the rectum the more urgent the tenesmus, and the nearer the caecum the more griping. These two symptoms, with localized points of tenderness, formed a guide to the extent of lesion. Several forms are described, catarrhal, ulcerative, gangrenous and amoebic. Catarrhal and amoebic were the forms seen in my experience. The symptoms of catarrhal dysentery varied but little, patients would come to sick-call and give a history like this: for four or five days they thought they had an attack of diarrhoea. The stools would at first be copious and watery, then gradually grow more scanty, more varied in character and considerable pain and tenesmus would be experienced. On looking at the stool they would find the deposit tinged or streaked with blood, later the desire to go to stool would increase, and be accompanied by agonizing pain and tenesmus. They would hardly leave the stool before they would want to return. They experienced a sensation of some body in the rectum, with a constant desire to expel it.

I have experienced this and it seemed as if the body was red hot. The suffering is very great, they break out in a profuse sweat, although there is very little fever if any. The tongue becomes furred, there is loss of appetite and great thirst. The tendency of this disease is to rapidly become sub-acute or chronic. The mortality varies in different countries from three to forty per cent. The sequelae are more dangerous than the disease itself. The chronic ulceration, scarring, contractions and thickening of the gut are conditions which cannot be remedied, and may lead to obstruction or general atrophy of the entire tract, resulting in asthenia and death. Such patients rarely pass a healthy movement. They are troubled with dyspepsia, pass their food unaltered, have recurring attacks of diarrhoea and are flatulent. They develop a condition like sprue and finally succumb. Liver abscess is another danger. It is frequent and rapidly fatal. This may follow quickly or occur months after apparent good health.

Amoebic Dysentery

This has been said to be a distinct form of the disease. It is caused by the amoeba coli. The liability to liver abscess is much greater in this form. The microscope makes the diagnosis in these cases. The treatment is rest in as complete a form as possible; all solid food is stopped. It would be well if all food could be stopped. Milk is the diet generally prescribed. Malarial symptoms, if present, demand quinine. Many drugs are used and first ipecac, after this method: the patient is given opium in some form, usually laudanum, in twenty drop doses until they are just stupid, twenty to thirty grains of powdered ipecac is then administered and the patient instructed to lie as quietly as possible, to resist the inclination to vomit, and not to swallow the saliva which collects in the mouth. Should the ipecac be brought up the dose is repeated as soon as symptoms of nausea have subsided. It is again repeated on the following day. This treatment often aborts the disease and the symptoms subside. Calomel, either with opium and ipecac, or alone, is sometimes used, as are also aperient sulphates. Sometimes we gave opium one grain, bismuth subnitrate twenty to thirty grains every two hours, or instead of the opium one-quarter grain doses of morphia. After some few hours the patient may be fed. For pain, morphine is used, also opium internally, and hot fomentations, or turpentine stupes applied externally; the washing out of the colon with hot water, or hot normal salt solution gives relief from the tenesmus and the incessant desire to go to stool. One hundred and twenty grains of bismuth subnitrate, laudanum thirty minims in starch water is often used as an enema. In the chronic form nitrate of silver in the strength of one-half to one grain per ounce is used. This treatment is only used after all acute symptoms have subsided. For the flatulence three or four drops of turpentine on sugar is given. Amoebic dysentery is treated in the same manner with the exception of the enemas. Quinine is the remedy here and is given in the strength of from twenty to sixty grains to the quart of warm water. This is often alternated with tannic acid, sixty grains to the quart. Prophylaxis consists in procuring a pure water supply, in avoiding unwholesome food and alcohol, in keeping the surface of the body warm by warm clothing, especially the abdomen, in correcting constipation and stopping diarrhoea.

Correspondence

"DHOBIE ITCH."

January 5, 1902.

To the Editors of the ALBANY MEDICAL ANNALS:

Referring to Dr. Andrews' article, "Tropical Diseases, as Observed in the Philippines," and his reference to a "Dhobie Itch," I would say, as a matter of some interest, that during my service as First Lieutenant and Assistant Surgeon, Thirteenth Pennsylvania Volunteer Infantry, I saw several hundred such cases, and found them, as did Dr. Andrews, a considerable source of discomfort to the victim, and very contagious. After trying almost everything else, with varied results in the degree of success attained, I found that the most rapid and satisfactory cure was a wet dressing of 1 to 1,000 bi-chloride of mercury.

This cured the cases very rapidly, and was a source of a great deal of comfort during the time of its application. This may possibly be of some interest to some of the profession.

Very sincerely yours,
GEO. C. MERRIMAN.

547 ADAMS AVENUE, SCRANTON, PA.

Editorial

> "Concerning this unfortunate poet, Christopher Smart, who was confined in a madhouse, he had, at another time, the following conversation with Dr. Burney. BURNEY: 'How does poor Smart do, sir; is he likely to recover?' JOHNSON: 'It seems as if his mind had ceased to struggle with the disease; for he grows fat upon it.'"
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> **The Life of Samuel Johnson, LL.D.**
> **By James Boswell, Esq.**
> **Volume I, p. 310.**

Revolutionary Legislation

The history of the official care of the insane in the State of New York began with the opening of the first State institution for the insane in Utica in 1844. The organization was effected by the appointment of a local board of managers. Other institutions followed, whose organic laws were based upon those of the Utica State Lunatic Asylum, as it was called, and it later became necessary to consider discrepancies in these statutes and to provide for varying local conditions. These ends were attained by the first general insanity law of the State, known as Chapter 446 of the Laws of 1874. This chapter preserved intact the powers of the local boards, and provided in addition for supervision by a State officer, a Commissioner in Lunacy, who had practically unlimited power of investigation and criticism of all institutions, both public and private, in which the insane were confined. The first Commissioner was Dr. John Odronaux, a man of unblemished reputation. He was succeeded by Dr. Stephen Smith, whose name has been identified with State charities for a number of years. Both of these gentlemen, representing the highest type of professional manhood, gave unstinted praise to the work of the institutions.

To meet a rapidly increasing burden in the number of patients and institutions, and for more liberal consideration of the complicated questions involved, the general plan was modified in 1889 by the creation of a State Commission in Lunacy, consisting of a physician, a lawyer and a layman. The purpose of this law was still supervision and independence, but an insidious tendency to centralization crept in, which culminates this year in the bill in the Legislature to abolish all local administration. This bill places all power in the State Commission and establishes local boards of visitors. At first sight it would seem that a reversal of functions is established, and that the management of the institutions is thus vested in a central body with a local supervisory board. A further analysis, however, reveals the possibilities of a harmonious system of central power with local ramifications.

The insane stand in different relations to the community from any other class of citizens. They are not, like prisoners, to be subjected to punishment and coercion for the safety of the public, but as helpless people, the victims of disease, are entitled to treatment and guardianship for the protection of themselves. The exercise of the function of guardianship is a most delicate one. The officers of the State institutions have always welcomed the independent body, just as any honest and intelligent man welcomes assistance and advice in the performance of a delicate duty, particularly when it concerns the rights of another. The patients, on their side, are thus protected against errors of judgment or viciousness.

The recognized policy in the care of the insane, representing a growth based upon years of experience, demands this independent supervision, whether there is at stake the welfare of the single individual, cared for in his home by the mistaken devotion of friends, or the control of a private or public institution, ministering to five patients or five thousand. Destruction of this system by a close and impenetrable central State organization, can only lead to disaster, eventually to reconstruction, before which come years of personal suffering and wrong, and political abuse carried on in the name of charity. The bill proposed is revolutionary and probably the most pernicious measure ever introduced in the Legislature relating to the care of the insane.

Why Osteopathy ?

There has recently been introduced, in the Legislature of this State, a bill licensing the practice of osteopathy. We do not propose to go into the details regarding the merits or demerits of this bill, which is founded on the existing medical law, but would state in a general way that, as it stands at present, it contains one or two serious defects.

To the average medical practitioner such a bill merely indicates that certain persons, calling themselves osteopaths, are endeavoring to gain legal status in order that they may lawfully poach on what he considers his own particular preserves; as a rule he does not go deeper and ask himself why osteopathy should exist.

About one hundred and five years ago one Samuel Hahnemann formulated certain principles of diagnosis and treatment, which to many were fantastic in the extreme. Hahnemann's explanation of the pathology of disease was simplicity itself, nearly all diseases, according to his views, being the result of a skin affection which is not usually discussed in polite society. We would simply remark that Hahnemann's pathological views would justify a homeopathic medical society in adopting for its motto the old Scotch saying, "God bless the Duke of Argyll!" And yet, notwithstanding the absurdity of many of Hahnemann's teachings, the school of practice which he founded has grown and prospered. Probably the reason of its success was not realized at its inception, but now its origin, as well as the current methods of the regular practitioners of that time having become historical, an unbiased study of the conditions makes it clear that its success was due not so much to its own good qualities, as to the fact that the regular medical treatment of that time was barbarous in the extreme. There can be no doubt in the minds of the unprejudiced that the success of homeopathy was in great part due to its adoption on the part of the public as a protest against overbleeding, overblistering, overpurging and overdosing.

It is a trite, but probably fundamentally true saying, that history repeats itself. Is not the growth of osteopathy an indication that the medical history of the beginning of the nineteenth century is tending toward repetition at the beginning of the twentieth? While the profession of the present day cannot be accused of the barbarous methods of their professional ancestors of one hundred years ago, yet it seems to us that they are in a measure guilty of a refined barbarity of drug therapy, coupled with more or less neglect of so-called physiological therapeutics, such as baths, massage and the like. It is only necessary to glance through the advertising pages of a current medical paper to realize the enormous numbers of new and fantastically named drugs which are foisted on the profession—unknown, untested, and unsung, except by the commercial firms whose sole object is to sell them. It seems to us almost as barbarous to fill the systems of our patients with such doubtful remedies, as it was in the old days to salivate and indiscriminately bleed them. What the medical profession needs to-day, and needs badly, is an infusion of healthy scepticism, especially as regards the value of the numerous drug preparations now flooding the market. When the regular physician decides to use fewer drugs, and those only when they have been properly tested by reliable authorities, and when he relies more on rational methods of treatment than on indiscriminate dosing, then and only then will newborn pathies die the natural death of the immature and feeble.

State Medicine

IMPORTANT MEDICAL BILLS IN THE NEW YORK LEGISLATURE.

(Published by courtesy of the Committee on Legislation of the Medical Society of the State of New York, HENRY L. K. SHAW, M. D., *Secretary.*)

Senate Bill No. 16. Introduced by Mr. Hill. Assembly Bill No. 70. Introduced by Mr. O'Malley. An Act "To amend the public health law and the acts amendatory thereof, in relation to pharmacy, and repealing certain sections thereof." Introduced January 1st, read twice, and referred to Committee on Public Health.

This amendment relates only to the election of the members of the State Board of Pharmacy for the Eastern Section. Instead of electing members by the Manhattan Pharmaceutical Association, Kings County Pharmaceutical Society and New York German Apothecaries' Society, the amendment provides that an election be held in the month of June each year in the borough of Manhattan and the borough of Brooklyn. To be eligible for election or to vote, one must be a member of the New York State Pharmaceutical Association or of an incorporated pharmaceutical association or society in one of the counties comprising the boroughs of Manhattan and Brooklyn.

Senate Bill No. 40. Introduced by Mr. Brackett. Assembly Bill No. 75. Introduced by Mr. Rogers. An Act "To amend the insanity law, relating to the management of state hospitals, abolishing the boards of managers and creating boards of visitation therefor, and extending the powers and duties of the state commission in lunacy." Introduced January 6th, and referred to the Judiciary Committee. The Assembly Committee on the Judiciary reported it favorably to the Assembly on January 15th and it was advanced to a second reading.

This bill abolishes the local boards of managers of State institutions for the insane, and centralizes all administration in the State Commission in Lunacy. It creates boards of visitation for the State Hospitals, with powers of inspection and recommendation. This measure thus places the former administrative authority of the local boards in the central commission, and transfers the supervisory power of the central commission, for which purpose it was created, to local boards of visitation. This bill opens the way for political control of State institutions and is probably the most pernicious measure relating to these institutions which has ever been introduced in the Legislature.

Senate Bill No. 64. Introduced by Mr. Brackett. An Act "Regulating and legalizing the practice of osteopathy in the State of New York and fixing penalties for the violation thereof." Introduced January 7th, read twice and referred to the Committee on the Judiciary.

In this bill osteopathy is defined as that science or system of healing which treats diseases of the human body by manual therapeutics for the stimulation of the vital remedial forces within the body itself, for the correction of misplaced tissue and the removal of obstructions or interferences with the fluids of the body, all without the internal administration of drugs or medicines.

It is framed similar to the present medical law and provides for a board of osteopathic examiners. To be eligible for examination candidates must be graduated from a regularly conducted school of osteopathy and have personally attended at least four terms of five months each. In other words a man can study osteopathy for twenty months, pass the osteopathic board of examiners and be entitled to all the privileges afforded a regular practitioner who is obliged to spend at least four years in a medical college. The majority of persons, unfortunately, are not able to judge for themselves as to what constitutes fitness in a physician and in the interest of the public health this bill should be defeated.

Assembly Bill No. 129. Introduced by Mr. Nye. An Act "To amend the public health law, relating to the practice of pharmacy by physicians and surgeons." Introduced January 9th and referred to the Committee on Public Health.

This provides that a regularly licensed and practicing physician and surgeon who owns and conducts a drug store in connection with his practice, shall be entitled to a license as a pharmacist or druggist.

Assembly Bill No. 155. Introduced by Mr. Oxford. An Act "To amend an Act entitled 'An Act to revise, amend and consolidate the general acts relating to public instruction, known as the consolidated school law, relative to teaching physiology, hygiene and narcotics.'" Introduced January 10th and referred to the Committee on Public Education.

Senate Bill No. 115. Introduced by Mr. Slater. An Act "To prevent the adulteration of and deception in the sale of drugs, chemicals and other substances." Introduced January 13th, read twice and referred to the Committee of Public Health.

This bill makes it a misdemeanor, subject to a fine of twenty-five dollars, for any person, firm or corporation to prepare or sell an adulterated or altered drug that differs from the standard strength, quality or purity established by the last edition of the United States pharmacopœia.

Senate Bill No. 118. Introduced by Mr. Goodsell. An Act "To amend chapter two hundred and seventy-two of the laws of eighteen hundred and ninety-seven, authorizing the commissioners of the almshouse of the city and town of Newburgh, in the county of Orange, to pay Saint Luke's home and hospital of Newburgh, New York, for the care and maintenance of indigent persons." Introduced January 13th and by unanimous consent advanced to third reading.

This is a local bill which provides that the almshouse commissioners pay to St. Luke's Hospital the sum of one dollar a day for patients sent to the hospital from the almshouse. The total amount paid in any one year is not to exceed the sum of two thousand dollars.

Assembly Bill No. 162. Introduced by Mr. Hooker. An Act "To amend the code of civil procedure relative to the disclosure of professional information." Introduced January 13th and referred to the Committee on Codes.

This provides that dentists shall not be allowed to disclose any information acquired in attending a patient in a professional capacity.

In Memoriam

SUMNER C. WEBB, M. D.

Dr. Sumner C. Webb, who for a long time has been in a very feeble condition of body and mind, due to the general breaking down of faculties by old age, died at Homer, N. Y., December 21, 1901, aged 81 years and two months. Dr. Webb was born in Homer on October 21, 1820. He was the son of Mr. and Mrs. Curtis Webb, who had a family of five children. When sixteen years of age he attended winter school, teaching or working upon the farm during the summer. In 1844 he was appointed a candidate to the State Normal School, established at Albany that year, entered the first class of that institution and graduated with it. He was appointed a teacher in the school and taught there for several years. At the same time he studied medicine with the late Dr. Swinburne, of Albany, and graduated from the Albany Medical College in 1854.

In 1852 he was called to Trenton, N. J., to take the position of Vice-Principal in the New Jersey State Normal School in that city, where he remained for some years. Resigning his position there he was engaged in the insurance business for a short time and then went to New York and took a course of medical lectures to prepare himself for practice. In 1887 he returned to Homer and commenced the practice of his profession, which he continued successfully until 1895, when he was disabled by an apoplectic shock. He has since been in very feeble health.

Dr. Webb married about the year 1848, while in Albany, Miss Cynthia Pierce, of Cooperstown, N. Y., whom he became acquainted with at the Albany Normal School. Three sons were born to them, Charles, William and Howard C., the last of whom alone survives. Mrs. Webb died in 1892.

Two brothers, Albertus, of Homer, and Rev. William H., of West Springfield, Mass., are living.

Dr. Webb became a member of the Congregational church of Homer when eighteen years of age and had always been a faithful member. Failing health of late years has kept him from attendance upon services. He was a much valued citizen and a good physician and had lived an active, useful life.

PETER I. STANLEY, M. D.

Entered into rest, October 5, 1901, Dr. P. I. Stanley, of Windham, N. Y. He had been in failing health for about six months. He did not relinquish his practice until twelve weeks before his death. He was then confined to his home, gradually sinking, despite the careful attention of his family and able physicians, until the end came. He was calm and in full possession of all his faculties until the last. His practice was extensive. His presence was soothing in the sick room. He was loved and respected, and his record as a physician, citizen, Christian, and Mason is unimpeachable. He has stood before the people of Windham for more than a generation on the side of right and justice and noble manhood. He never neglected the poorest patient. He was born in Harpersfield, Delaware county, August 11, 1825. He was educated in district schools and at Stamford Academy.

In 1849 he commenced the study of medicine and graduated from the Albany Medical College in January, 1853. In February of the same year he located at Ashland, Greene county, N. Y., where he remained sixteen years.

In 1869 he removed to Windham, where he resided until his death.

In April, 1853, he married Sarah E. Bassett. Ten children were born to them, five of whom, with his widow, survive him: Mrs. J. C. Tallmadge, Catskill; Mrs. E. C. Moon, New York city; Mrs. Lawyer Mellen, Windham; Nathan Wilmot Stanley, a civil engineer of New York city, and Sarah Kathleen Stanley, an art student at Pratt Institute, Brooklyn. For over twenty-five years he had been an examining surgeon of the Pension Bureau at Washington, a member of the Presbyterian Church, and a Chapter Mason.

He was a Republican in politics and had been Coroner of Greene county.

Mrs. P. I. Stanley.

Peter Faling, M. D.

Dr. Peter Faling was born at Clifton Park, Saratoga county, N. Y., March 12, 1832, and removed with his father, Dr. Cornelius Faling, to Gasport, Niagara county, in 1840. After graduating from the Union School at Lockport, N. Y., he entered the Albany Medical College and received his degree in 1854. He then joined his father in general practice. In addition to his large general practice, his ability in the line of ophthalmology was widely known, particularly before the days of specialists. He operated with success for cataract and other conditions requiring operative procedure, but in recent years it became his practice to refer these cases to specialists. He also enjoyed distinction in the treatment of fractures, and in medico-legal cases his testimony carried great weight. His health began to break down about three years ago, and he died rather suddenly on November 23, 1901. He was a member of the Niagara County Medical Society and the New York State Medical Society. He married Miss Emily Robinson, of Gasport, who survives him.

R. M. Elliott.

Isaac T. Monroe, M. D.

Dr. Monroe died at his home in Granville, N Y., Monday morning, December 30, 1901, of broncho-pneumonia. He was born at South Granville, and was sixty years of age.

His father, the late Isaac Monroe, was one of Granville's first physicians; his brother, the late Dr. Rensselaer Monroe, was a noted physician in his day, besides Dr. Henry C. Monroe. The decedent was a graduate of the Albany Medical College of the class of 1866, and in his younger days had charge of one of the departments in the old City Hospital in Albany. He was a skillful surgeon and paid special attention to lung troubles. He first settled in the practice of his profession at West Pawlet, and went to Granville twenty-eight years ago, where he has since resided. In 1873 Dr. Monroe married Miss Ada Burch, of West Pawlett, who survives him, with one daughter, Miss Edna. An infant son died in 1880. He is also survived by his mother, a sister, Mrs. Fletcher Lee, of South Granville, and two brothers, Dr. Henry C. Monroe, of Sandy Hill, and James W. Monroe, of Hampton.

The neighbors and patients of Dr. Monroe speak most feelingly of the loss his town has sustained by his death. It is said of him that he was an acute, watchful, faithful physician, and that he came fully up to every requirement essential to a conscientious, earnest, devoted member of his profession.

Louis D. Masson, M. D.

Dr. Louis D. Masson died on the morning of January 10, 1902, at the Cohoes Hospital, after an attack of appendicitis. Dr. Masson became ill Friday night, January 3rd, and on Sunday underwent an operation. He rallied and hopes were entertained for his recovery. He became suddenly worse on Thursday evening and passed away at one o'clock the following morning. He was House Physician at the Cohoes Hospital and was a most popular young man. Dr. Masson received his education in Canada and later took a medical course at the Albany Medical College, from which institution he graduated with the Class of 1900. He is survived by one sister, Mrs. B. E. Amyot, wife of Dr. Amyot.

At a meeting of the physicians of the city of Cohoes, held January 11th, 1902, to take action upon his death, the following proceedings were taken:

Dr. C. E. Witbeck was elected chairman, and Dr. J. H. Mitchell secretary.

The chairman, on assuming his duties, said:

"Gentlemen.—This meeting has been called to take suitable action on the death of Dr. Masson, late House Surgeon of this Hospital and secretary of the Hospital staff, who died yesterday, after an illness of a few days, from appendicitis. Two operations were performed with the hope of saving his life, but without avail. All that surgical and medical skill could do was done for him. His young life went out all too soon.

"As House Physician he was faithful and efficient, painstaking in the line of his duty, with close attention to detail. Courteous and polite, affable to all, his two years' service in this Hospital was performed to the satisfaction of the medical and surgical staff, who in this manner testify to his worth. The very suddenness of his death comes to us as a shock, for it seems but yesterday he was with us so full of life and promise."

After these remarks, the chairman appointed a committee to prepare resolutions, which committee, after due deliberation, submitted the following:

The members of our profession, especially those who by their connection with the work done at the hospital, have known him better and more intimately, have appreciated his kind and gentle nature, his bright intelligence, his marked competence and thoroughness, and can fully realize the loss the profession and the hospital have sustained.

Dr. Masson had hardly assumed the duties of his office when he became closely identified with the work to be done, devoting at once to it his time and best attention. Prompt, ever courteous, well informed, considerate of all, he soon gained the respect and affection of every physician interested there; he won the esteem and friendship of every attachee of the institution, whether co-workers or subordinates; and earned the confidence and gratitude of the patients.

In him was solved the ever difficult problem of a medical resident equally liked by patient, house-personnel and hospital staff. He had the rare gift of being endowed with those qualities that make up our ideal of what the incumbent of such a position should be. Thus he leaves a record worthy of the highest praise and emulation.

His touching death at the post of duty, in the flush of youth, with his hopes all unfulfilled, with the brightest possibilities of the future before him, appeals strongly to our most loyal feelings and to our deepest compassion.

To his relatives, to the one especially upon whom the blow falls hardest, we extend our sincere sympathy. The loss they mourn in the death of this promising young physician is one also felt by the hospital, and by every physician who had the privilege to associate him with his work; and we therefore desire to inscribe here, in memory of him who has departed, the expression of our high estimation of his character and professional worth, and of our deep and sincere loss at his death.

This brief memorial of one who lived with us in our daily incoming and outgoing will soon be forgotten, but the recollection of the man will abide.

J. L. ARCHAMBAULT, J. D. MONTMARQUET,
J. D. FEATHERSTONHAUGH, J. F. MCGARRAHAN,
E. M. BELL.

Upon the suggestion of Dr. J. D. Featherstonhaugh, a committee was now appointed by the chair to place a memorial tablet to Dr. Masson in the Cohoes Hospital.

It was also decided to send a floral tribute to the home of the deceased, and that the physicians would attend the funeral in a body and wear for thirty days the usual emblem of mourning.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, DECEMBER, 1901

Deaths

Consumption	29	70 years and over	20
Typhoid fever	1	1 year or under	12
Diphtheria	5	Albany City Hospital	9
Cholera Infantum	1	St Peter's Hospital	4
Pneumonia	11	Homeopathic	1
Broncho-Pneumonia	3	County House	5
Organic heart disease	18	Home of the Aged	2
Apoplexy	8	Albany Orphan Asylum	3
Bright's disease	8	Total deaths	138
Cancer	13	Rate	15.16
Accidents and violence	3		
Births ...		*Marriages* ...	

HEALTH NOTES.

DIPHTHERIA IN ALBANY.

The influence of antitoxin on the death rate from diphtheria in the city of Albany for the four months, September, October, November and December, 1901, is of interest to the medical profession.

DIPHTHERIA REPORTED AND CONFIRMED AT BENDER LABORATORY.

	Antitoxin used	Antitoxin not used	Not known	Total
September	37	5	1	43
October	65	24	..	89
November	49	39	..	88
December	37	13	..	50
Total	188	81	1	270

In the 270 cases in all twenty-three died or 8.5%.

In the 188 cases in which antitoxin was used the deaths were eleven in number, or 5.8%. These eleven deaths had antitoxin given as follows:

Age	Time sick before antitoxin	Died after antitoxin	Cause
1— 7 yrs.	3 days	10 days	Paralysis of Heart.
2—10 mo.	......	24 hrs.	....
3— 6 yrs.	7 days	10 min.	Toxæmic.
4— 5 yrs.	7 days	10 days	Acute Nephritis.
5— 7 yrs.	2 days	2 days	Heart failure.
6— 7 yrs.	7 days	24 hrs.	....
7— 3 yrs.	5 days	1 hour	....
8— 4 yrs.	5 days	3 hrs.	....
9— 5 yrs.	5 days	2 days	....
10— 5 yrs.	4 days	12 hrs.	....
11— 5 yrs.	Promptly	5 days	....

In all these cases with one exception the antitoxin was given late in the case and the record emphasizes the necessity of the early use of the remedy. It is to be remembered also that in many of the cases the doctor was called late in the disease, when death seemed imminent and some of the cases were among poorly nourished children.

In 81 cases in which antitoxin was not used there were twelve deaths or 14.8%.

The advantages of the use of antitoxin are again confirmed by these figures and the earlier in the case the remedy is given the more certainty of sure results. The Department of Health has no information of any ill effects of the use of antitoxin.

The Department of Health will supply antitoxin free to the indigent poor to the limit of the appropriation.

These figures are taken from the new record books which in time ought to give most valuable comparative statistics.

BENDER LABORATORY REPORT ON DIPHTHERIA TESTS

	Positive	Negative	Release positive	Release negative	Spoiled tubes	Total
September.......	19	17	12	13	4	65
October.........	52	40	33	21	10	156
November.......	65	79	64	46	16	270
December.......	31	62	41	60	5	199
	167	198	150	140	35	690

The present card system shortens the period of house quarantine for both diphtheria and scarlet fever materially.

DIPHTHERIA

	Longest	Shortest	Average
November................	59 days	5 days	27 days
December................	51 days	6 days	21 days

SCARLET FEVER.

	Longest	Shortest	Average
November................	39 days	20 days	29 days
December................	No cases	released	

As a rule diphtheria quarantine is shortened decidedly and in almost every case the old quarantine period of four weeks is lessened.

It will be noticed also that the scarlet fever quarantine is also shortened, but so few cases have occurred in Albany during the last few months that the average is not to be taken as conclusive.

SANITATION IN HAVANA AND MANILA.

The remarkable influence of modern sanitary methods in the reduction of the death rate in the City of Havana, Cuba, has become pretty generally known. The death rate for the month of November was 19, and compares favorably with other cities of the same class.

Sanitarians are now observing the effect of systematized sanitation in the Philippine Islands and particularly in the City of Manila. The act creating the Board of Health for the Philippine Islands went into effect on August 7, 1901, and on that date the Provost Marshal General of the City of Manila turned over the control of health matters to the civil authorities.

The City of Manila has 250,000 inhabitants and its Health Board consists of a Commissioner of Public Health, a Sanitary Engineer, a Chief Health Inspector, a Superintendent of Government Laboratories and a Secretary. There are several honorary members of the Board who are not entitled to a vote, and these members consist of the Chief Surgeon of the Division, the Chief Quarantine Officer of the Marine Hospital Service and the President and Vice-President of the Association of Physicians and Pharmacists of the Philippine Islands.

The city is divided into twelve sanitary districts, each sanitary district has a chief sanitary inspector and three assistants. These inspectors are provided with an office in each district. Just now this sanitary corps is making house to house inspections and the result of such inspections are reported to the Chief Health Inspector and proper remedies applied in case of violation of health laws. Like all cities of this kind, the sanitary conditions are not satisfactory. There is no sewer system worthy of the name and a large number of buildings require alteration and remodeling. Running through the city is a river which divides it into two almost equal halves and in addition, the city is cut up into a number of sub-sections by natural water-ways, which are connected with the river and bay. These water-ways are tortuous and unwalled and into them empty a number of private water closets. As a result of the construction of the houses, a majority of the lower stories are watersoaked from six to eight feet from the ground. The night soil is disposed of in cesspools, stone vaults, sewers connected with the river or bay and dry earth.

As would naturally be expected, tuberculosis is a very common disease among a certain class of citizens. Scarlet fever and diphtheria are very rare, but measles is occasionally reported.

The first monthly report published is for the month of September and the Bertillion system of classification is made the basis of recording deaths.

The death rate for this month was 37.35 and it is noticed that there were 9 deaths from typhoid, 8 deaths from malaria, 16 deaths from dystentery, 12 deaths from plague, 71 deaths from consumption of the lungs, 33 deaths from simple meningitis, 9 deaths from apoplexy, 239 deaths from convulsions of children, 55 deaths from acute bronchitis, 16 deaths from chronic bronchitis and 74 deaths from diarrhea of all ages.

The future reports will be awaited with interest.

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held January 5th, 1902, in Alumni Hall. The meeting was called to order at 8:55 P. M., the President, Dr. William H. Murray in the chair. The following members were present: Drs. Blumer, Conley, Curtis, Elting, George, W. H., Happel, Jenkins, Lewi, Lipes, Lomax, MacFarlane, Mosher, Murray, O'Leary, Root, Sautter, Shanks, Shaw, Streeter, Theisen, Thompson, Vander Veer, A., Vander Veer, E. A., Van Rensselaer, Washburne, Wiltse.

1. *Reading of the minutes of the last meeting.*

Dr. BLUMER moved that the minutes as printed in the ALBANY MEDICAL ANNALS be adopted. The motion was seconded and carried.

2. *Minutes of special meetings.* There were none.

3. *Applications for membership.* The name of Dr. ELIZABETH SWEET was presented and referred to the censors by the President.

4. *Reports and resolutions.* Dr. ROOT, as Chairman of the Committee on Legislation of the County Society and member of the Committee on Legislation of the Medical Society of the State of New York, brought the attention of the Society to a bill regulating osteopathy just introduced by Senator Brackett in the State Senate. An abstract of the bill was read by the Secretary. This bill legally recognizes osteopathy, gives osteopaths a separate State Board of Examiners and provides for a twenty-month course in osteopathy. Dr. Root thought the Society should put itself on record to oppose this bill and offered the following resolution:

Resolved, That the Medical Society of the County of Albany disapprove of Senate Bill No. 64, entitled An Act to Regulate the Practice of Osteopathy and

That said County Society use every honorable means to prevent its passage.

Dr. Vander Veer, in seconding the resolution, said that the bill as it stands should be defeated but thought certain amendments could be made which would render it less obnoxious.

5. *Special communications.* None were received.

6. *Reading of papers.*

Dr. Edgar A. Vander Veer read a paper on "A Rare Case of Abscess of the Liver," and presented the patient.

The President then declared Dr. Vander Veer's paper open for discussion.

Dr. Lewi said that the patient was under his care when he first entered the hospital. At that time he suffered from almost continuous chills and severe dyspnœa. There was marked dullness on the right side and no indication whatever of hepatic trouble. The diagnosis was made of empyema and three and a half pints of pus were withdrawn. After the aspiration there was a marked improvement in the dysnœa and chills. When the chills returned he advised a more thorough operation and referred him to Dr. Vander Veer who discovered the true condition.

Dr. Jenkins enjoyed hearing of this case. At the Post Graduate Hospital he had seen a similar case where the diagnosis was based on chills and enlarged liver. The operation performed at that time consisted first in an incision low down and inflammatory adhesions produced. After a few days the abscess proper was opened and the pus evacuated. In this case however the patient died.

Dr. A. Vander Veer saw a few cases during the Civil war and very few had come to his notice until this last year when he has seen four cases. He expressed some surprise at Dr. E. A. Vander Veer's statement that one-fourth of all diarrhoeal diseases in the Philippines were complicated by abscess of the liver. He was present at the operation and spoke of the long distance a probe could be introduced downwards. The cavity was immense and an entire sterile towel was left in the cavity for twenty-four hours. The thorax did not collapse after the removal of the pus. A week after the operation bile escaped from the wound. He asked Dr. Blumer whether the abscess was primary or secondary in the liver.

Dr. Blumer replied that he could see no reason why it could not have been a subphrenic abscess. Pus under tension in a large liver abscess would keep out bile and after the removal of the pus the bile could escape into the cavity. He thought that bile could have been detected in the first fluid withdrawn but no test was made as the fluid was labelled as coming from a case of empyema.

Dr. George Blumer read a paper by himself and Dr. August Jerome Lartigau on "An Analysis of 500 Autopsies with Regard to Healed and Quiescent Tuberculosis, with Some Remarks on Pleural Tubercles."

The President then announced Dr. Blumer's paper open for discussion.

Dr. Root said the Society was greatly indebted to Dr. Blumer for the paper just presented. It was one of the most able, important and scientific papers he had ever heard. He was greatly impressed, after hearing this paper, with the thought of hope for victims of this disease. The old idea was that tuberculosis is absolutely incurable. Careful painstaking workers like the writers of this paper show that recovery is possible and that by proper care of the patient and his surroundings its dissemination can be prevented. These facts rightly presented to the public should reduce the mortality from this dread disease. Over fifteen thousand persons die annually from this disease in New York State. He spoke of State legislation on this subject, of how much had been done and how much still remains undone. He believed that this paper from one known to be able, competent and honest will have very great force.

Dr. CURTIS said that the paper was a result of mathematical accuracy. It dealt with facts, not inferences, and bears the stamp of work done in the workshop. He gets the idea from the paper that clinically healed tuberculosis, *i. e.*, so reported, is really not healed but is latent or quiescent and may possibly be infectious to others.

Dr. CONLEY said that out of forty autopsies at the Buffalo State Hospital there were five cases showing evidences of healed tuberculosis.

These five cases were in patients over sixty years of age with terminal dementia. There had been no history of active tuberculosis in any of the cases although one of the patients had been in the hospital for nearly forty years.

Dr. MACFARLANE said that the present agitation about tuberculosis is good, but it has aroused a great and wholesome dread of the disease in the mind of the laity. It is looked upon with as great horror as the pest. The statistics read this evening show that most of us have some signs of this disease. A German axiom is, "Jedermann hat ein bischen Tuberculose." This may explain some clinically obscure cases so often seen in practice. There are no well marked evidences and no physical signs but the patients are sick and have a slight evening rise of temperature. He thought it might be a subacute tuberculosis due to these tubercular nodules. The use of tuberculin for diagnosis might be of advantage.

A point to be emphasized from this paper is that the danger time is among the very young. To save the race from the ravages of the white scourge all efforts must be directed upon persons under twenty-five years of age. He made a strong plea for intelligent prophylactic care of children.

Dr. SHAW read a paper on "Recurrent Vomiting in Children."

The PRESIDENT then declared Dr. Shaw's paper open for discussion.

Dr. HAPPEL spoke of a case that had come under his observation where the father was an alcoholic and went off on sprees frequently lasting a week. One son was an epileptic. He wondered if the vomiting had not something in common with epilepsy.

Dr. MACFARLANE said that the presence of acetone in the urine generally suggests some serious condition. It is present in diabetic coma and other severe states. In this form of vomiting however there is no grave disorder and the little patients recover in a remarkably short time.

There appearing no further business the Society adjourned.

H. L. K. SHAW, *Secretary.*

WILLIAM H. MURRAY, *President.*

MEDICAL SOCIETY OF THE COUNTY OF RENSSELAER

The monthly meeting of the Medical Society of the County of Rensselaer was held Tuesday evening, January 14, 1902, at 8:30 p. m., at the Court House, in the City of Troy, N. Y. The meeting was called to order by the President, Dr. G. A. Bradbury, in the chair. The following members were present: Drs. G. A. Bradbury, H. E. DeFreest, W. W. Seymour, M. D. Dickinson, Rivett, Thompson, J. B. Harvie, E. Howd, E. A. Brown, J. C. Cipperly, H. Elliot, J. Flynn, H. O. Fairweather, C. E. Nichols, J. C. Hutchinson, H. White, M. A. Wheeler, E. R. Stillman, T. G. Dickson, Jas. Love, R. B. Bontecou, D. G. Buchanan, Wm. Kirk, Jr., P. O'Brien, H. C. Gordinier, D. Tarbell, Silcocks, Neary, C. H. Travell, Becker, R. A. Kirkpatrick, John Barnes, Wansbury, English, M. J. Zeh, D. W. Houston, D. A. McCarthy, Snyder, C. B. Herrick, Sprague.

Reading minutes of last meeting.—Moved that the minutes be adopted as printed in the ALBANY MEDICAL ANNALS. Carried.

Members elected: Associate members, Dr. E. J. Hanratta, Watervliet, and Dr. W. E. Silcocks, Green Island; members, Drs. J. H. Flynn, D. A. McCarthy, E. R. Stillman.

Members proposed: Associate member, Dr. Hannon, Watervliet, N. Y.

Reports of committees: None.

Scientific papers read.—I. "Pancreatitis: Acute and Chronic," Dr. W. W. SEYMOUR. Discussed by Drs. H. C. GORDINIER and WILLIAM KIRK, Jr. The paper was very thorough and interesting.

II. "A Case of Insular Cerebro-Spinal Sclerosis," Dr. JAMES C. HUTCHINSON. Discussed by Drs. H. C. GORDINIER, H. WHITE and WILLIAM FINDER, Jr.

III. "Health Department Rules and Regulations: Their Relation to the Public Health Law," Dr. C. E. NICHOLS, Health Officer of the City of Troy, N. Y. Dr. Nichols' paper was very thorough and brought forth response from many physicians present. Among those who particularly discussed his paper were Drs. W. W. SEYMOUR, J. B. HARVIE, WILLIAM FINDER, Jr., H. C. GORDINIER, J. H. CIPPERLY, M. D. DICKINSON and R. B. BONTECOU.

The papers having been completed, the President directed a letter received from Dr. FRANK VAN FLEET, Chairman of the Committee on Legislation of the Medical Society of the State of New York to be read by the Secretary, which was as follows:

NEW YORK, *January* 11, 1902.

DR. H. E. DEFREEST, Troy, N. Y.

Dear Doctor:—A bill has been introduced in the Legislature by Senator Brackett, of Saratoga Springs, legalizing the practice of Osteopathy by people who are not physicians.

I do not think we can consistently object to any particular method of treating diseases, but we have a perfect right to object to privileges being granted to anybody in treating disease unless the requirements are as great as those exacted of physicians generally. It is necessary, too, in order to protect the community, that all who treat disease shall demonstrate their knowledge of pathology, anatomy, physiology and allied subjects.

The enactment of a law giving privileges of this kind to people who do not wish to comply with the medical laws, will be a great injustice to people who are not competent to judge of what constitutes fitness in a physician, and I want to beg of you to get your County Medical Society to pass resolutions opposing this measure, and also to get all the doctors in your county to write letters opposing it.

I would suggest that you get your Society, if possible, to appoint a committee of one or more medical men, to represent you at the hearings in Albany, and to keep in touch with the Committee on Legislation of the Medical Society of the State of New York.

Will you please let me hear from you on this subject? If we can present a solid opposition to this effort to evade the medical laws, we will be certain of defeating it.

Very truly yours,

FRANK VAN FLEET,
Chairman Committee on Legislation, Medical Society of the State of New York.

Dr. WILLIAM FINDER, Jr., moved and the motion was seconded, that a committee of five, including the President and Secretary, be appointed. Carried. The President appointed on the committee Drs. William Finder, Jr., John B. Harvie and C. E. Nichols.

A motion was made and carried that the meeting adjourn.

H. E. DEFREEST, *Secretary.*

GEO. A. BRADBURY, *President.*

MEDICAL ASSOCIATION OF TROY AND VICINITY

A regular monthly meeting of the Association was held January 7, 1902, at the office of Dr. J. B. Harvie. The meeting was called to order by the President, Dr. F. A. Smith. Forty members were present.

The minutes of the previous meeting and the Treasurer's report were adopted.

Applicants elected: Drs. W. E. Fox, North Hoosick, and W. E. Curtin, Cohoes.

Applications received: None.

This being the annual meeting, the President appointed the following as a committee on nominations: Drs. J. B. Harvie, M. D. Dickinson and E. D. Ferguson. The following were reported: For president, Dr. J. W. Morris; vice-president, Dr. T. C. Church; secretary and treasurer, Dr. E. W. Becker. The candidates were unanimously elected.

Papers:

Dr. JAMES P. MARSH exhibited some very clear and interesting radiographs.

Dr. E. D. Ferguson discussed one specimen and briefly described the operation and after care of the case. It was a case of calculi in both kidneys very clearly shown in the radiograph.

The subject of X-ray photography was further discussed by Drs. Wm. Finder, W. E. Curtin, H. C. Gordinier and D. W. Houston.

Dr. R. H. Irish reported a case of Embolism of the Popliteal Artery following Pneumonia. This subject was discussed by Dr. H. C. Gordinier, who reported a case of Thrombosis of the Femoral Artery following Traumatism; and Dr. H. J. White, who reported a case similar to that reported by Dr. Irish.

There appearing no further business, the Association adjourned.

E. W. Becker, *Secretary.*

J. W. Morris, *President.*

Medical News

Edited by H. Judson Lipes, M. D.

The Albany Guild for the Care of the Sick Poor.—*Statistics for November, 1901:* Number of new cases, 42. *Classification of cases:* Dispensary cases receiving home care, 2; dental, 2; district, 7; other charity cases, 9; total number of charity cases, 20; moderate-income patients, 22. *Classification of diseases:* Medical, 17; surgical, 6 (including 2 dental cases); gynæcological, 13; obstetrical, 6. Number of contagious disease in surgical list, 2. Removed to hospital, 1; died, 4. *Visits of the Guild Nurses:* Number of visits with nursing treatment, 568; for professional supervision of convalescents, 207; total number of visits in November, 775; cases were reported to the Guild by 3 of the health physicians and by 12 other physicians; dentists, 2.

Statistics for December, 1901: Number of new cases, 51. *Classification of cases:* Dispensary cases receiving home care, 3; district cases reported by health physicians, 8; charity cases reported by other physicians, 24; total number of charity cases, 35; moderate-income patients, 16. *Classification of diseases:* Medical, 19; surgical, 9; gynæcological, 23. This general classification includes 8 obstetrical cases. Number of contagious diseases: Medical, 3; surgical, 2. Deaths, 4. Cases were reported to the Guild by 3 of the health physicians and by 18 other physicians. *Visits of the Guild Nurses:* Number of visits with nursing treatment, 492; for professional supervision of convalescents, 203; total number of visits in December, 695.

Special Obstetrical Department: November and December, 1901: Number of cases, 3; reported by Dr. Goewey, Dr. Stevenson and Dr. Tedford, health physicians. Obstetrician, Dr. H. J. Lipes; number of calls, 16. Medical students in attendance, 4; number of calls, 17; Guild Nurses in charge, 3; number of visits, 33; total number of visits in this department, 66.

Albany Hospital Training School for Nurses.—At a meeting of the Patronesses of the Albany Hospital Training School for Nurses, held on December 2, 1901, the following officers were elected: President, Mrs. William L. Learned; vice-president, Mrs. Frederick Townsend; treasurer, Mrs. Simon W. Rosendale; secretary, Mrs. James McCredie.

Albany Homeopathic Hospital.—The committee of the Albany Homeopathic Hospital and Dispensary has issued a circular letter, stating that the time has come when serious consideration must be given to the question of new quarters for the institution. The present building is totally inadequate both in size and efficiency, and that it cannot be made sufficient seems to be the unanimous decision.

The letter says that the Board of Trustees has secured option on a site of 168 feet front on the east side of North Pearl street, just north of Clinton avenue. This site offers the advantages of location in the center of the city and ease of access for emergency work; together with the quiet of a retired street and the space necessary for the requirements of light and air. And further, the rentals from the buildings upon the premises will be ample to pay all charges of carrying it, until there can be procured funds sufficient to justify building, which will take place as soon as energetic efforts upon the part of those interested can bring it about.

For the reason that one or two of the options will expire in a short time, speedy action will be necessary to secure these premises, and an earnest appeal is made for immediate subscriptions, in order that the opportunity may not be lost. It is the intention of the board to follow this at once with an effort to build the new hospital, and such a one as will meet the needs of the institution and at the same time not prove a burden to its friends to support.

The following are the names of the committee who have signed the letter: Mrs. Samuel L. Munson, Mrs. John E. McElroy, Mrs. Henry Bronk, Dr. George E. Gorham, Dr. Edward G. Cox, Dr. Arthur B. Van Loon, Charles V. Winne, Albert J. Wing, Edwin Van Wormer.

Albany Department of Charities and Correction.—The annual report of the Commissioner of Charities and Correction of Albany for the year 1901, shows that the total number of patients admitted to all hospitals for the year was 1,042; the number of applications rejected after examinations, 312; service rendered by all hospitals at the contract price, four dollars per week as above, amounts to $29,001.07, and for which the city pays on limited appropriation plan the sum of $26,000, leaving a total to be made up by hospital management of $3,001.07.

The appropriations were as follows: Albany Hospital, $7,500; St. Peter's, $7,500; Homeopathic, $3,500; Child's, $3,500; Incurables, $4,000. Bills were rendered: Albany Hospital, $9,023.43; St. Peter's, $7,863.42; Homeopathic, $3,957.69; Child's, $4,688.55; Incurables, $5,665.70.

Deficits: Albany Hospital, $1,523.43; St. Peter's hospital, $363.42; Homeopathic, $457.69; Child's, $1,188.55; Hospital for Incurables, $1,665.70.

UNION COLLEGE ALUMNI ASSOCIATION OF NEW YORK.—The Union College Alumni Association of New York held their fourteenth annual reunion and banquet Thursday evening, December 12th, at the Hotel Savoy. A large number of Union alumni were present. The business meeting was held in the parlors of the Savoy, and the following officers were elected for the coming year: President, Hon. Frederick W. Seward, '49; first vice-president Rev. Dr. Charles D. Nott, '54; second vice-president, Rear-Admiral J. Rufus Tryon, '58; secretary Edgar S. Barney, '84; treasurer, Bayard Whitehorne, '82. Resolutions were adopted upon the deaths during the vear of the following members of the Association: General Daniel Butterfield, '49; Professor Maurice Perkins; Professor Henry Whitehorne; Treasurer Gilbert King Harroun, and Ex-President Eliphalet Nott Potter, '61. The College was represented by President Raymond, Dean Benjamin H. Ripton, Professor William Wells, Professor Sidney G. Ashmore and the College Glee Club. When the remnants of the dinner had been disposed of and the cigars lighted, the speakers held the attention of the old boys until midnight. The following is the list of toasts and speakers: "Address of Welcome," Hon. Frederick W. Seward, President of the Association; "Our Flag," followed by the song "America;" the memory of President McKinley, drunk in silence; "Alma Mater," President Raymond, '75; "Old Union," Hon. Charles C. Nott, '48, Chief Justice of the Court of Claims; "The Sons of Union," Professor William Wells; "Alaska," Rev. Dr. Sheldon Jackson, '55, United States Commissioner of Education to Alaska; "The College Spirit," William H. McElroy, '60; "The Faculty," Dean Benjamin H. Ripton, '80; "Union's Growth and Prosperity," Frank Bailey, '85, Treasurer of the College; "Old Girls," Andrew W. Gleason, '60.

ANNUAL MEETING OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.—The American Electro-Therapeutic Association will hold their twelfth annual meeting at the Kaaterskill, Catskill Mountains, N. Y., on Tuesday, Wednesday and Thursday September 2, 3 and 4, 1902. The officers of this association are: President, Dr. Fred H. Morse, Melrose, Mass.; secretary, Dr. George E. Bill, Harrisburg, Pa.; treasurer, Dr. R. J. Nunn, Savannah, Ga.

THE AMERICAN GYNÆCOLOGICAL AND OBSTETRICAL JOURNAL.—The editor and proprietor of the *American Gynæcological and Obstetrical Journal,* Dr. John Duncan Emmet, of New York city, has announced that this journal ceased publication with the December number, 1901. The right to the title of this journal has neither been sold nor given to any one whomsoever and all connection with or responsibility for the use of the title is disclaimed.

A NEW ATLAS OF CLINICAL MEDICINE.—Johnathan Hutchinson, F. R. S., General Secretary of the New Sydenham Society, has requested Messrs. P. Blakiston's Son & Co., of Philadelphia, the American agents of the Society, to announce the publication of "An Atlas of Clinical Medicine, Surgery and Pathology," selected and arranged with the design to afford, in as complete a manner as possible, aids to diagnosis in all departments of practice. It is proposed to complete the work in five years, in fasciculi form, eight to ten plates issued every three months in connection with the regular publications of the Society. The New Sydenham Society was established in 1858, with the object of publishing essays, monographs and translations of works which could not be otherwise issued. The list of publications numbers upwards of 170 volumes of the greatest scientific value. An effort is now being made to increase the membership, in order to extend its work.

PERSONAL.—MARRIED: COLEMAN—ARMSTRONG.—At Lafayette, N. J., October 18, 1900, at the home of the bride's mother, by the Rev. W. S. Harper, of Hamburg, Miss Sallie Price Armstrong and Dr. Joseph G. Coleman (A. M. C. '97), of Hamburg, N. J.

—Dr. JOSEPH D. CRAIG has been reappointed Health Officer of the city of Albany.

—Dr. WILLIAM G. LEWI has recently been appointed City Physician of Albany by Mayor Gaus.

—Dr. ARTHUR SAUTTER has been appointed to fill the newly created position of Deputy Health Officer.

—Dr. F. P. VAN DENBURGH has changed his address from 571 First avenue to 220 Twenty-third street, Watervliet, N. Y.

—Dr. ARTHUR A. WILL (A. M. C. '00), recently Resident Physician of the Albany Hospital, has located at North Creek, Warren county, N. Y.

—Dr. JAMES H. FLYNN is located at 633 1-2 Second avenue, Troy, N. Y.

—Dr. ROBERT B. CASTREE (A. M. C. '91) has been appointed Resident Physician at the Saratoga Hospital, Saratoga, N. Y.

—Dr. H. BEAMAN BURTON (A. M. C. '92) formerly of Troy, N. Y., is now located at 624 North Fifty-Sixth street, Philadelphia, Pa.

—Dr. JOHN S. NEWCOMB (A. M. C. '88) has recently been appointed Assistant Superintendent of the Eastern Hospital for the Insane, located at Medical Lake, Washington.

Book Reviews

A Handbook of Pathological Anatomy and Histology. By FRANCIS DELAFIELD, M. D., LL. D., and T. MITCHELL PRUDDEN, M. D., LL. D. Sixth edition. New York: William Wood & Co., 1901.

This new edition of Delafield and Prudden's well known work is divided into three parts. Part one takes up the method of making post-mortem examinations, and of preserving and examining pathological specimens; part two considers general pathology, and part three special pathology.

The first section explains lucidly the usual methods of post-mortem examination, laying a good deal of stress on the special points to be noted in medico-legal cases. The part of this section dealing with the preservation and examination of pathological specimens, deals both with gross and microscopic sections, and includes descriptions of those of the latest methods which have shown their adaptability to every day work.

The section on general pathology begins with an excellent introductory chapter, which might be called an epitome of the philosophy of pathology. The remainder of the section covers the usual ground.

The section on special pathology takes up systematically and in a brief way the lesions found in the different organs.

The book as a whole is characterized by a lucidity of statement, a broad and philosophical view of the subject, and an absence of doubtful hypotheses. It is difficult in a book of such general excellence to lay special stress on given sections, but we cannot refrain from calling special attention to the introductory chapter on general pathology, the section on inflammation, and the section on tumors. The presence of foot notes referring to important articles on the subjects under discussion, adds greatly to the usefulness of the book both to the advanced student and to the practitioner. The illustrations are excellent and actually illustrate, which is more than can be said of some recent ones. We notice with pleasure that the histological illustrations are the work of the hand and not the camera. The photographic illustrations of gross pathological specimens are without exception the best of their kind we have seen; the colored plates are also good. The print is of a good size and clear.

As a necessarily brief, but terse and philosophical exposition of pathology we cannot too highly recommend this book, both to students and practitioners. G. B.

The Principles of Pathological Histology. By HARVEY R. GAYLORD, M. D., and LUDWIG ASCHOFF, M. D. Lea Brothers & Company, Philadelphia and New York

This book of 352 pages is divided into three parts, the first dealing with microscopical technique, the second with the pathological histology of organs, and the third with the principles of optics and photomicrography.

The section on microscopical technique is comprehensive, well written, and arranged in a logical and systematic manner. It explains fully the various steps in the somewhat complicated modern technique of histological preparation. We see no mention in this chapter of Stepanow's rapid celloidin method, which gives excellent results in cases where rapid diagnosis is required.

The section on the pathological histology of organs is complete, and illustrated by numerous photomicrographs and a few colored plates. The majority of the photomicrographs are technically of the greatest excellence, and most, though not all, of the colored plates are good. A good deal more space in this section is devoted to the etiology of carcinoma and sarcoma, especially from the point of view of the "so-called" parasites, than is justified by our present knowledge of these bodies.

The last section on optics and photo-micrography is full of practical points, and is an excellent exposition of the subject. The book is especially to be commended for the technical excellence of its photomicrographs. They mark a distinct advance in this line. In some instances they, without doubt, excellently illustrate the lesions; in other instances they are far from accomplishing this. A few are mere smudges. At best this, like other methods of illustration, has but a restricted usefulness in teaching, and is entirely subsidiary to the study of actual sections. The bookmaking of the volume is excellent. G. B.

Manual of Physical Diagnosis. For the Use of Students and Physicians. By JAMES TYSON, M. D., Professor of Medicine in the University of Pennsylvania, and Physician to the University Hospital; Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, etc. Fourth Edition, Revised and Enlarged. With Colored and Other Illustrations. Published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia. 1901. 12mo. Cloth, $1.50 net.

This may be regarded as the standard American work upon the subject of which it treats, and as a manual for instruction in the class-room or for reference by the practitioner, it fulfills every requirement. In addition to the usual chapters upon physical examination of the chest and abdomen, there are included chapters upon the blood, the gastric contents, the Roentgen ray, and the "Making of an Autopsy." The last-mentioned chapter is based upon Vorchow's well-known manual. In view of the somewhat extended scope of the work, this chapter might have been amplified by a brief outline of the bacteriological methods now almost always regarded as an essential part of routine *post-mortem* examinations. Occasional references are made to the physical examination in childhood, and more might be done in this direction. The examination of the urine is not included, as the author has issued a separate volume on this subject.

Photographic Atlas of the Diseases of the Skin. A Series of Eighty Plates, Comprising more than One Hundred Illustrations, with Descriptive Text, and a Treatise on Cutaneous Therapeutics. By GEORGE HENRY FOX, A. M., M. D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York; Consulting Dermatologist to the Board of Health, New York City; Physician to the New York Skin and Cancer Hospital, etc. Philadelphia and London: J. B. Lippincott Company. 1901.

The first three fasciculi of this elaborate Atlas were described in the ANNALS of October, 1901. Parts IV, V and VI have since appeared and fully maintain the high standard of photographic reproduction of lesions and letter-press, which justified full commendation of the initial numbers.

Part IV contains plates of *rosacea erythematosa, alopecia areata, psoriasis nummulata, pityriasis circinata* and *pemphigus*. The text deals with *anthrax, canities, carbunculus, chloasma, chromophytosis* and *cicatrix*. In Part V are given plates of *sycosis, scrofuloderma, syphiloderma papulo-squamosum, eczema papulosum* and *morphœa*. The text contains articles on *clavus, comedo, cornu cutaneum* and various forms of *dermatitis*. Part VI is illustrated by plates of *pityriasis seborrhoica, chromophytosis guttata, psoriasis gyrata, pityriasis diffusa* and *fibroma*. *Dermatitis herpetiformis* and *eczema* are the subjects of the text.

. Dr. Fox continues his good natured admonitions. Thus, "in the treatment of gray hair the most sensible thing that can be done is to admire it." He describes the proper methods of dyeing the hair, but the "injudicious use of hair dyes only serves to call nearly everybody's attention to what might otherwise pass unnoticed." He also, in the discussion of "clavus," writes plainly upon barbarous fashions in shoes and describes the ideal shoe as "broad-toed, though not necessarily square-toed. If shoes were made fan-shaped, like the imprint of a bare foot in the sand, instead of having the greatest width across the ball of the foot, they might look strange at first, but they would be comfortable for all time. Those, then, who cared more for comfort than for style, as most of us falsely profess to do, would have both comely and cornless feet."

The care taken by the author and publisher in the production of this Atlas is manifested in every page, and its practical value should insure it a place in every general medical library.

The Principles and Practice of Medicine. Designed for the Use of Practitioners and Students of Medicine. By William Osler, M. D. Fourth Edition. New York: D. Appleton and Company, 1901.

Dr. Osler's Practice has reached the fourth edition in less than ten years, and with each edition the progress in medicine has been faithfully recorded, in conformity with the author's belief, as stated in the third edition, that "at the present rate of progress a text-book six years old needs a very thorough revision." The present volume shows no less conscientious work than the others, and with proper attention to all of the demands of rapidly augmenting literature and experience, the size of the book has not been increased. Indeed a rather remarkable feat has been accomplished, in that the revision of the text has been carried on without alterations in the pagination, the modified statements of the author thus revealing his more recent conclusions.

We are being educated to the habit of expecting a new edition from Dr. Osler every two or three years, and the influence for good in the practice of medicine which this industry on his part has worked, is beyond calculation. It is not too much to say that no other single factor has had more influence upon the dissemination of modern scientific principles in clinical medicine than his book. The Annals has previously commented upon earlier editions, and it is only necessary to add that the issue of 1901 maintains the standard.

A Treatise on the Acute, Infectious Exanthemata. By WILLIAM THOMAS CORLETT, M. D., L. R. C. P., Lond., Professor of Dermatology and Syphilology in Western Reserve University. Pages viii-392. Size, 6¼ by 9¼ inches. Sold only by Subscription. Price, Extra Cloth, $4.00 Net. Philadelphia: F. A. Davis Company, Publishers.

Most of our information about this very important category of diseases is gained from text-books on Diseases of Children, where the account must of necessity be brief and academic. There was room for a book similar to the well-known work of Filatow, and the volume before us fills a need. It contains what are practically monographs on the infectious exanthemata. Variola, varicella, vaccinia, scarlatina, rubeola and rubella are each described at length. At the head of each chapter are given the synopsis and name of diseases in the German, French, Dutch, Italian, Spanish, Danish and Latin languages. Each disease is discussed in the following order: definition, varieties, symptomatology, complications and sequelæ, pathology, etiology, diagnosis, prognosis and treatment. Under treatment, full attention is given to prophylaxis and directions are given how to manage the disease, disinfect, etc. In some instances the duties of health officers are given. Six hundred and twenty-three references are given, which show the amount of study and labor expended.

There are forty-two plates, twelve of which are colored. Twenty plates are used to illustrate the various types and stages of smallpox, and they are exceptionally good.

The first chapter is devoted to a historical resumé of the exanthemata in general and forms very interesting reading. Smallpox is divided into three types, variola vera, variola hæmorrhagica and variola modificata. The last type receives the least attention, although it is the type which has been prevalent throughout this entire country during the past two years. This type, the author thinks, occurs in individuals oftener than in epidemics. In the last outbreak, however, the mild form has predominated, not only in persons protected by vaccination, but in those who have never been vaccinated and in unvaccinated children.

In the description of the varieties of rubella no mention is made of the alleged "Fourth Disease." Dykes claims that the variety resembling scarlet fever or rubella scarlatinosa is not rubella at all, but a disease *sui generis,* and in this he has received the support of some well-known pediatrists.

This book should have a wide circulation. It is a book for the medical practitioner and cannot be classed as a text-book. H. L. K. S.

Current Medical Literature

MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

The Influence of the Cervical Branch of the Sympathetic on the Frequence of the Movements of the Heart in Man. (De L'influence du cordon cervical du sympathique sur la fréquence des movements du coeur chez l'homme.)

WERTHEIMER and GAUDIER. *Compt. Rend. de la Soc. de Biologie, Tome LIII, No. 6.*

The authors state that in several reported cases of exophthalmic goitre, resection of the cervical ganglion of the sympathetic has been followed by an amelioration of the tachycardia. This has been generally attributed to a suppression of the function of the cardio-accelerators. The authors have shown experimentally that in the dog this proceeding is often followed by an acceleration of the heart, but that this is slight, disappears under anæsthesia, and is probably due to reflex action. The authors then raise the question as to whether in man any of the cardio-accelerator fibres pass through the cervical sympathetic. They relate a case in which, during two operations of sympathetic, done a week apart, they were able to test the effect of electrical stimulation of the cervical ganglion on the heart's action. Several electrical stimuli were applied on each side before the ganglion was severed and after it was cut across, but no effect either of acceleration or retardation was observed. The authors conclude that in view of some opposing evidence it may be certainly said that in all instances at any rate removal of the cervical sympathetic does not lead to retardation of the heart's action.

The Treatment of Experimental Tuberculosis by Muscular Tissue and Serum—Zomotherapy. (Traitment de la tuberculose experimentale par la viande et le serum musculaire—Zomotherapie.)

CHARLES RICHET. *Revue de la Tuberculose, No. 1, February, 1901.*

Richet's article is an extensive description of his work in the experimental treatment of dogs, in which he had produced tuberculosis, by means of feeding them with large quantities of meat or meat juice. He experimented with raw and cooked meat and with different quantities of meat and meat juice. He found that cooked meat was useless, but that raw meat and meat juice if given in sufficient quantity inhibited the development of tuberculosis and caused a cure in many advanced cases. He explains the action of the meat or juices as an antitoxic one, claiming that they promote the formation of antitoxines in the liver.

He thinks that this method of treatment will be applicable in man, but insists that at least 600 grammes of the meat juice must be taken daily, and that it must be prepared fresh, as it very soon spoils and when spoiled promotes gastro-intestinal disturbances.

Contribution to the Study of Osteomalacia. (Contribution a l'etude des Osteomalacies.)

Gaget and Bonnet. *Revue de Chirurgie, February 10, 1901.*

The three principal theories advanced to explain the disease are: (1) chemical; (2) infectious; (3) nervous. The resemblance of the bone in osteomalacia to that decalcified with acids has led certain observers to assume that some acid present in the blood was the cause of the decalcification. Certain writers claim to have found an excess of lactic acid in the bones of osteomalastic patients. Other writers deny the existence of an excess of lactic acid. The writers have performed certain experiments in which guinea pigs were fed lactic acid for a considerable period of time without any appreciable effect upon the bones. Rindfleisch has suggested that osteomalacia is due to a venous hyperemia, which releases an excess of carbonic acid which dissolves out the lime salts. There does not, however, appear to be any positive evidence in favor of the acid theory. Under the head of chemical theories may be considered those which attribute the disease to certain toxic substances originating from the internal secretion of organs—notably the ovary. It has been definitely proved that removal of the ovaries diminishes the excretion of the phosphates. While ovarian extract, fed to patients whose ovaries have been removed, causes the phosphatic excretion to reach normal, or, even to go above normal it has, however, been impossible to produce osteomalacia by prolonged administration of ovarian extract. The writers conclude from certain experiments in which ovarian extract was fed to rabbits, (1) that it decidedly increases the elimination of phosphates, and (2) that ovarian extract possesses certain decidedly toxic properties.

The toxic theory thus does not rest upon any positive facts. The infectious theory is of but little importance. Petrone, in 1892, claimed to have discovered in the blood of osteomalactic patients the micrococcus nitrificans, which caused the softening of the bones, and which coccus injected into animals produced osteomalacia. These observations and experiments have not been confirmed. It is possible that infectious processes may have some causal influence as in a case reported by Adenot, in which osteomalacia developed in a woman following puerperal fever. Thus, too, osteomalacia has been known to follow pernicious anæmia.

The nervous theory is based upon a vitiation of the nervous influence which controls nutrition. The attempt to demonstrate lesions of the central of peripheral nervous system has met with but little success, but such is the case with other diseases of the nervous system. Fehling believes that an increased ovarian activity is the cause in a reflex fashion of osteomalacia. Of the reflex influence of the ovaries upon the body at large, or certain parts of it, there is abundant evidence, and hence the theory of Fehling is rather plausible. The writers conclude:

1. That osteomalacia is a disease of nutrition of the bones, consisting in an insufficiency of lime salts with an increased softening. This nutritive disturbance may remain local or become generalized.

2. Local osteomalacia is observed after traumatism—infectious diseases of the bones, and in certain nervous affections.
3. The anatomical lesions are the same in both the local and general forms. These lesions present certain varieties.
4. The pathogenesis of osteomalacia is in no way specific.
5. Evident predisposing causes are age, sex, climate, etc.
6. The determining causes are obscure, but disturbances of the nervous system appear to play the most important rôle.
7. The explanation of the satisfactory results following castration rests upon the fact that the internal ovarian secretion increases the elimination of the phosphates.

Recent Russian Attempts to Treat Alcoholism by Hypnosis. (*Ueber die neueren russischen Versuche zur Behandlung des Alkoholismus mittels der Hypnose.*)

DWORETZKY. *Zeitschrift für diätetische und physikalische Therapie, Band IV, Heft VIII, 1901.*

The most rational and satisfactory methods of cure have been by suggestion. Knery has treated seventeen cases of alcoholism by hypnosis with favorable results and believes such treatment superior to medicaments. It is not alone necessary to command "not to drink," but the character of the patient and the surrounding conditions should be understood, to get the best results.

Sinani treated sixty-two patients at a dispensary. In the beginning suggestion was made every day, then later at intervals. In spite of the difficulties of dispensary treatment, sixteen fully recovered and have not drank in from one-half to ten years. The duration of treatment was from twelve days to ten months. Bechterew has employed hypnotic suggestion in the treatment of chronic alcoholism for more than ten years. For the continuance of the cure it is usually necessary to repeat the suggestion from time to time. In spite of good results he does not consider suggestion alone sufficient for a permanent cure, as alcoholism is not a disease of the will-power alone, but often depends upon organic changes. He therefore combines with hypnosis hydrotherapy, bromides with codeine, heart tonics, strychnine, etc.

Abramowitz is enthusiastic over this treatment. Of sixteen patients treated, nine were completely cured. He believes that the combination of drugs with hypnosis gives no better results than suggestion alone. Wjasemsky believes this treatment the best for alcoholism. He has found these patients to be easily hypnotized. In addition he has prescribed a mixture of equal parts of tincture of nux vomica and tincture of strophanthus, which is taken for months. He has found a difference in those who wished to be cured and others who were urged by relatives and friends to undergo the treatment.

There has never been a bad effect from a withdrawal of stimulants. The tremor and general weakness disappear quickly under suggestion. The observation of the cured cases has extended over three years.

PATHOLOGY

Edited by George Blumer, M. D.

Tetanus.

WIDENMANN. *Bibliothek von Coler, Band X, 1902.*

The action of the intitoxic serum in tetanus is not rapid, so that no immediate disappearance of the clinical symptoms should be expected. Even in the favorable cases there is only a gradual amelioration of the course as the antitoxin only to a very slight extent influences the disease present in the ganglionic cells and its chief action is to neutralize the toxin in the circulation and that which is being formed. A marked result from the antitoxin treatment has in the majority of the cases been noted only when treatment began in the second or third day. The total statistics of all reported cases treated with serum show undoubtedly an improved recovery rate.

In Kohler's report of ninety-six cases there was a mortality of 34.4 per cent. and in the one hundred and seventy-one cases considered by Holsti it was 43.2 per cent. The grouping of the cases treated with serum has only a modified value as to the results of treatment, as such results depend largely upon the period of incubation, the course of the disease and the time when the antitoxin is employed. Cases with long incubation periods and a chronic course are apt to give a favorable prognosis, while the result is bad when the antitoxin is injected late. The cases, however, which recover spontaneously, *i. e.*, without serum, are not many. The mortality, too, is not small in subacute cases and the number of cases with an incubation period over two weeks is few. The mortality in cases with incubation of one to ten days is under antitoxin treatment 43.8 per cent., while with an incubation of over ten days it is 18.5 per cent. Without doubt the serum improves the prognosis in subacute cases and seems to have little effect in the severe acute cases.

Behring claims that a reduction of fifteen to twenty per cent. in mortality is probable if the antitoxin is injected at the appearance of the first symptoms. Wilms, however, reports four cases from Trendelenburg's clinic who received antitoxin within the first thirty hours, and all died. The important thing is to recognize tetanus as early as possible and immediately employ the serum. The physician who waits until trismus is well developed will obtain, in his severe, acute cases, little or no result from antitoxin. While trismus is often the first sign, there may in cases be other earlier signs present. Contractions in the effected extremity, pains in the back and stiffness in the rump when sitting up may appear one to four days before the throat and jaw symptoms. At times from the wound the bacillus of tetanus may be discovered before the clinical symptoms appear.

The Pathogenesis of Gastric Ulcer. (Die Pathogenesis des chronischen Magengeschwurs.)

VAN YZEREN. *Zeitschrift für klinische Medicin, Band XLIII.*

While it has been always difficult to produce severe gastric ulcers in animals, and still more difficult to prevent their rapid healing, the author, by subdiaphragmatic section of the vagi, has produced true gastric ulcers similar in character to those found in the human species. He discovered that irritation or section of the vagus induced an increased gastric mobility, and that some days after section there was an almost continuous spasm of the stomach which could be palpated through the abdominal wall. At the same time, when the nerve was cut on both sides, a gastric ulcer occurred in half the cases. This had all the characteristics both macroscopically and microscopically of an ulcer in the human species. There was a necrosis of the mucous membrance with surrounding inflammatory and hyperplastic changes. Regeneration occurred, but the ulcer did not heal as the degenerative changes continued in their further course. Usually the ulcer developed after the second week, but in some cases earlier. Only exceptionally did more than one ulcer develop and its location was in the pyloric region near the lesser curvature. This lesion does not occur in animals, and the only changes which were determined during life were the gastric spasm. There was no change in the secretions of hydrochloric acid. A spontaneous cure of the ulcer did not occur, and one perforated into the abdominal cavity. When the author, before the operation, divided the muscles of the pyloric portion longitudinally, or did a gastric enterostomy, the development of the ulcer was prevented in most cases. His conclusion is that the ulcer is a result of gastric spasm which interferes with nutrition by the contraction of the vessels. Although in men a spasmodic contraction of the pylorus is rarely palpable, and an intermittent retention of the food is not often observed, he believes in the occurrence of gastric spasm in ulcer. This is the primary change, although no cause for its occurrence is known. From this conclusion it is only a short step to the section of the pyloric muscles as a new surgical method in the treatment of gastric ulcer.

OPHTHALMOLOGY

Edited by C. M. Culver, M. D.

Color Blindness and the Tests to be Adopted for its Detection.

F. W. Edridge-Green. *London Ophthalmic Review, October, 1900.*

Holmgren's test is inefficient. Medical opinion, as to its trustworthiness, has changed. Some physicists still consider it adequate. A physicist is not a competent judge of this matter, since he is likely to mistake for psychical phenomena results which are only physical, chemical or electrical. Psychical phenomena cannot be weighed or measured by rule, but must be gained by direct evidence from the mind itself. The physicist is too apt to try to compare facts that are not comparable. In the last report of the Royal Society's Committee on color vision the last page gives a summary of the cases of color blindness detected at the examination of about three hundred railway employees. Two facts, stated there, are noteworthy. 1. Five color-blind persons escaped detection by Holmgren's test. 2. No color-blind person escaped detection by all the lantern tests. Though a derelict was not detected by one lantern test, another lantern test revealed his defect. Hence, obviously, a lantern test could be constructed that would detect all cases. The perception of color is conveyed to the mind through a perceptive center which is able to distinguish only six definite points of difference (colors) in the spectrum, which really presents millions. For the normal-sighted there is a hexachromic theory of color vision which is independent of light and shade. Such a theory obviously explains all that is explicable by a trichromic theory. It also agrees with the fact that both blue and violet have been demonstrated to be primary. Light, acting up the retina, liberates the visual purple from the rods and a photograph is formed, the cones conveying the impression of the photograph to the brain. Not only is there a visual substance, but that substance is purple. The author answers objections that have been made to this assumption, likewise describing the experiments he has made that have led him to it. The curves and equations that have been constructed to prove that normal color vision is trichromic are mathematically incorrect, judged only by the facts on which they were based. If the view be correct, that a separate color-perceiving center exists, methods which aim at obtaining, information concerning a color, by measuring its luminosity, are not more likely to be followed by a useful result than if we were to endeavor to obtain information concerning the pitch of a note by observations on the intensity with which it is struck.

A Case of Bullet Injury of the Occipital Lobes with Loss of Half of Each Visual Field.

G. ANDERSON CRITCHETT. *Transactions of the Ophthalmological Society of the United Kingdom, January 31, 1901.*

The patient was a captain in the British army and was struck by a bullet (probably a Lee-Metford) on the side of the head. He lost his sight at once, but did not become unconscious for half an hour. He was comatose for eight days and at the end of that time he was still blind. He was trephined the day after the injury at the point of entrance and exit. The trephine aperature was situated two and one-half inches above Reid's base line on the right side, in a vertical line above the posterior border of the mastoid process, and one and one-half inches below and slightly behind the parietal eminence, four inches from the external occipital protuberance. The aperture of exit was one-half inch to the left of the middle line, two inches above the protuberance and one inch below the lambda. When examined, the pupils were active, the fundi normal, and the vision in each eye was six-sixths and Jaeger's number one.

The lower half of each visual field was lost almost completely, the line being irregular. The patient had always been color-blind. The loss of field was evidently due to injury of the cortical visual centres. The course of the bullet must have been through the anterior port of the right middle occipital convolution, injuring also the right and left cuneus. The sudden impact probably caused temporary paralysis of the visual centres from concussion.

That there was a considerable amount of hemorrhage was proved by the rapid onset of unconsciousness, and this or the actual injury caused by the bullet may account for the persistent failure of the lower half of the visual field, though on the latter supposition it is difficult to explain the exact symmetry of the visual loss. There was no optic neuritis detected.

The Nature of Acute Glaucoma. (*Sur la nature du glaucome aigu.*)

A. Terson. *Annals d'Oculistique, July, 1901.*

It is affirmed by the author that the majority of instances of acute, primary glaucoma bear close and striking resemblance to the acute, idiopathic œdema, which occurs in various organs of the body, but more especially in the pulmonary area. There is similarity also in the mode of production; a diffuse toxemic condition is always present, and this may be either a general infection, such as erysipelas or influenza, or some pronounced diathesis, as rheumatism or gout. The presence of hyperopia is supposed to have additional bearing on the tendency of this form of glaucoma to arise; and it is pointed out that, since the diathesis as well as hyperopia, may be a hereditary condition, the coincidence of acute, primary glaucoma occurring in several successive generations is the less remarkable.

In addition to the two predisposing causes, as stated, there is a third potential factor necessary to produce the local hypersecretion, or intense serous outpouring and consequent œdema, which constitutes the state of acute, primary glaucoma. This participant cause is usually some transient excitement of a nervous or reflex emotional nature; and it is for this reason that the disease principally occurs in subjects with a neuro-arthritic tendency.

The intense local hypersecretion disturbes the equilibrium of the vascular mechanism of the eye, and the only positive relief and improvement afforded is by the performance of a scleral irridectomy. This nullifies the superinduced strangling action of the iris and permits the natural, efferent channels again to resume their function. The author mentions that he has found the blood-tension in this form of glaucoma to remain normal, while in the subacute and chronic varieties its degree is increased, which may be due to the presence in the latter of a general arterial sclerosis.

Reference is made to several of the theories which have been put forward, from time to time, in explanation of the exact nature of the mechanism involved in the production of the serous exudation and local œdema, but the question still remains open to discussion.

With regard to prophylaxis and treatment, special attention to general health and hygiene is advocated, with the view of combating, as far as possible, the existing predisposition or diathesis; this is in addition to the ordinary measures usually adopted.

A Case of Acute, Primary Glaucoma Treated by Eserine.

E. Donaldson, *Londonderry. London Ophthalmic Review, November, 1901.*

The author advised irridectomy, in a case of acute, primary glaucoma, but his advice was not taken; in reporting the case, he admits that the patient's refusal of operation had more wisdom in it than he foresaw. Mrs. S., aged eighty-six, in rather feeble health, was first seen in her own house March 10, 1896. Ten weeks earlier the left eye had become painful and its vision had failed. This attack had lasted a couple of days, when the eye-sight had so far returned that she was able to read with that eye. It then remained well a year, when it became red and painful, and vomiting occurred. Three days later the eyeball was congested, cornea slightly hazy, tension plus one and the anterior chamber was narrow. There were a few striæ of opacity in the lens. Ophthalmoscopy got a red reflex, but no fundus details. That eye could count fingers at two meters. She said the sight was variable and that that eye saw a bright circle around a candle. The eyelids were somewhat œdematous and the eye occasionally painful. The other eye had been lost a great many years earlier. An alleged "wart" had been removed soon after birth and the eye had collapsed after the operation. A solution of eserine, 1:240, with a little cocaine added, was instilled in the left eye. The patient was very tolerant of it and used it six times a day. It effected a contraction of the pupil till its diameter was but 2.5 milimeters. The eyesight improved till she could write a letter. Eserine was used constantly and the acute glaucomatous symptoms did not return. The author met the patient six months later, when both were driving. She still was using the eserine solution six times a day, was in good spirits and indulged in self-gratulation because no operation had been done. The following day the author received a letter written by her. It was more than a year later when she died. One week before her death, she wrote a letter. Her left eye remained in a satisfactory condition to the end.

A Rule for Combining Crossed Cylinders.

Pearse. *The Journal of the American Medical Association, 27 April, 1901.*

Students of optics find difficulty in combining crossed cylinders, to express the equivalent of their optical strength in terms of the sphero-cylinder. Such difficulty is obviated by the use of a rule which is: to transpose crossed cylinders into a sphere-cylinder; the cylinder is the sum of the two cylinders with the sign and axis of one of the cylinders. The sphere is the strength of the other cylinder with *its* sign. It is in skiascopy that the student will oftenest use such rules. The author says that the experienced refractionist will not need them.

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Original Communications

PSYCHIATRY IN THE TWENTIETH CENTURY.*

By HENRY M. HURD, M. D.,

Superintendent of The Johns Hopkins Hospital, Baltimore, Md.

I consider myself most fortunate in having this opportunity to do honor to the State whose liberality and public spirit first gave encouragement to Miss Dorothea L. Dix by establishing an institution for the care of the dependent insane at Trenton—an institution which she always considered the first fruit of her abundant labors in behalf of the insane in America and Europe. Uplifted by the success of her efforts in New Jersey, she went forth to arouse other commonwealths to the needs of the insane, and equal success crowned her labors. To this first State institution she returned in after years when humanity's battle was won, to find a life-long shelter and home within its walls. The record of what she accomplished for the insane must always be inseparably linked with the remembrance of how nobly New Jersey showed her gratitude to Miss Dix by giving her this home and the loving care of attached friends in her feebleness and old age. The personal work of Miss Dix which changed the attitude of the century towards the insane, had its origin here and here her life had its closing scene. All honor to the Commonwealth which thus crowned her life work with a gratitude most graceful, enduring and substantial.

The spirit of prophecy is not upon me, and it is not my object in the remarks which I shall make to forecast the future. I simply desire to speak of some of the problems which are sure to develop in connection with the care of the insane during the century upon which we have entered, and to point out the obvious trend of philanthropic thought and public policy in connection with the dependent insane.

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*Address delivered at the opening of an additional building at the New Jersey State Hospital at Morris Plains, November 21, 1901.

In America the opening of the Nineteenth Century found the original thirteen states increased to seventeen by the addition of Vermont in 1791, Kentucky in 1792, Tennessee in 1796, and Ohio in 1802—all pioneer States—and the population of the whole country had become about five and one-third million of souls. We were a struggling nation, burdened with the traditions of separate colonies, inexperienced in national or state government, poor in resources, and with our finances still deranged by a long and exhausting civil war, without a market for our products either at home or abroad, with our citizens devoid of unity of purpose or community of interest, uncertain of our standing among the nations of the earth, and equally untried at home. The Eighteenth Century, never noted for its charitable or humanitarian impulses, had left a scanty legacy of charitable institutions to the Nineteenth Century. No comprehensive system of what we call public charity existed anywhere. The Eastern Penitentiary, founded in 1786, in Philadelphia, was the only attempt to create an organized prison. In fact there seems to have been little need of any permanent place of detention for prisoners, for, according to McMaster, in one State 115 crimes were punishable with death and in the remainder at least 80 crimes were similarly dealt with. With such laws there must have been little accumulation of prisoners in prisons and little thought given to reforming them. In Connecticut during the first quarter of the century convicts were thrust into filthy and loathsome caves where a deserted copper mine served for a penitentiary. The poor, the helpless, the aged and the feeble dependent were annually sold in New England to the lowest bidder for their support. Elsewhere they were left to private charity or even wholly neglected. But a single institution for the treatment of the insane exclusively, existed—that at Williamsburg, Va., opened in 1773. The New York Hospital and the Pennsylvania Hospital had wards for the insane in connection with hospital wards. They were fitted up as cells and were places of confinement largely. The insane elsewhere were confined in jails, huts and log pens, and frequently, if raving madmen, they were tied up by the thumbs and flogged into insensibility and silence; in the newer States they wandered at will, a terror to the unprotected and a menace to themselves and to the community. Imprisonment for debt was universal. Jails and almshouses, where the vicious of both sexes were herded together, became hotbeds of disease and nurseries of vice. No public hospitals existed outside of New York and Philadelphia. These facts are given not to shock you but to present a reason why the work of the century which has just closed has been one of construction. The whole scheme of public charity for the relief of the criminal, the defective, the sick and the insane required to be called into being.

During the century which has passed since, the largest problem which has confronted every State, whether new or old, has been to provide for the constantly increasing number of the insane. In many instances, especially in pioneer States, the question at first was wholly one of providing physical care and shelter. Among pioneers, where all were poor and everyone must struggle for existence, it has frequently seemed an overwhelming burden to gather the insane together and to feed and house them, with little regard for anything beyond keeping them from exposure and hunger. To remove the insane poor from log pens, poorhouses, jails and prisons, and to give them an abiding place, kind care and physical comforts has been a work of the truest humanity. This has pre-eminently been the work of the Nineteenth Century in America. Thanks to the labors of large-hearted public men and assiduous philanthropists it has been prosecuted faithfully and energetically, until to-day not a State is to be found without provision of some sort for her dependent insane. While it is true that in some States the provision has not been as perfect or as ample as one could desire, it is a source of the keenest satisfaction to feel that the duty of providing for the insane is acknowledged as a public necessity, and the standard of care is constantly improving. In the majority of the States I am glad to say that the State institutions for the insane are models of good construction, efficiently heated and well ventilated, with hospital and infirmary wards and industrial buildings which render them admirably suited to the proper and humane care of every class. It may not be out of place for me to refer, as an illustration of this, more particularly to a hospital for the insane which I visited in one of the States of the Middle West a few weeks ago. It consisted of an admirably arranged central building with twelve wards and a hospital for each sex, with a farm cottage for men and an industrial cottage for women, an infirmary cottage for each sex and two cottages for the chronic insane. In addition there was a farm colony with barns, silos, slaughter house, machine shops, and the various industrial and household buildings which grow up about an institution for the care of a thousand or more patients. Probably two-score of equally perfect and well-appointed institutions are to be found in the United States. In a large experience of hospitals of every class, both at home and abroad, I can say without reservation that in my opinion no hospitals for the insane anywhere display the excellence of construction and the liberality of appointment which characterize the American hospital. The century has perfected and constructed unrivalled buildings for the requirements of various classes of the insane. There has been an evolution and development of hospital architecture until a differentiation of structure is seen which promises to leave little opportunity for similar experiments in construction for the opening century. In the erection of future buildings it will only be necessary to utilize our present experience and to select the best.

This has been due in a great measure to the quick-witted and ready ability of the average American to perceive and make his own the best of other men's work. The governing motive in many instances has doubtless been a recognition of the fact that the insane were not primarily objects of charity but owed their dependence to their condition of insanity and were consequently wards of the State. It has been evident to all enlightened thinkers that if it is for the interest, welfare and protection of the State to deprive an insane man of his legal rights and to separate him from his fellows, the State owes it to the man who has thus lost these privileges through no fault of his own, to take good care of him. For this and similar reasons it has followed that when institutions have been erected the feeling has been strong that they should be good enough for anybody and that any citizen when afflicted with insanity should not hesitate to seek relief within their walls. The legacy of the Nineteenth to the Twentieth Century in behalf of the insane may be briefly described as well-built and well organized institutions, with all which these words imply. Mechanical restraint, airing courts and other similar reminiscences of the old prison epoch in hospital management have been done away with, hospital wards have been created in many of the best institutions for the accommodation of cases of acute insanity, and training schools for nurses have been organized to instruct the nurses and attendants in their better care. The feeble and paralyzed of a more chronic class have been gathered into infirmary wards for that constant care which their helpless condition demands. Employment has been given to the chronic insane and the whole tendency has been to provide for all patients more of the surroundings of home and a greater freedom of life.

The surroundings, housing and material comfort of the insane in institutions consequently having reached this degree of perfection, the problems which now present themselves must be largely those of treatment. The conditions which accompany insanity and upon which it is dependent need to be carefully studied, that we may recognize what patients are treatable and do with wise discrimination what needs to be done for them. In this direction the recent steps which have been taken in many States for the establishment of pathological institutes are worthy of praise. In some instances I have feared that they have been projected upon too narrow and technical a basis. The questions to be studied in such institutes should not be exclusively the rigid ones which are solved by pathology and bacteriology, although none of these should be neglected; but the broader relations of insanity to general disease, neurasthenia, degeneration, alcoholism, intermarriage and heredity should be considered. Mental disease differs from other diseases in that it affects not alone the individual but society and the State. The misfortune of the individual brings inevitably into prominence, sometimes an undue prominence, his relation to the State, and hence it becomes important to study his disease in all its relations, with the hope that the proper remedy may be discovered and applied. It is gratifying to know that the work of the Pathological Department at this institution has been liberally supported, that it has been conceived upon broad lines and that excellent scientific results have rewarded the efforts of those who have had charge of it.

The medical treatment of the insane also needs to be more fully investigated and better settled. Epileptic insanity, for example, offers many medical and surgical problems which can be more readily studied and solved in institutions for the insane than elsewhere. Hospitals in their treatment of the acute insane need to be more thoroughly organized on the lines of clinical study which obtain in general hospitals. In an address which I delivered in New York three years ago I made a special plea for a more careful and systematic study and record of the clinical features of insanity, to the end that we might discover the laws of mental disease and have a surer basis for further pathological study and possibly in many cases might be able to connect the lesion of the brain with the preceding mental manifestations. It has been a source of gratification to know that such special study of the clinical features of mental disease is increasing everywhere and that in case-taking and history recording most institutions for the insane are now rivalling in thoroughness and accuracy the records of disease which are made in general hospitals of the first rank. Such foundation work is properly regarded as a pre-requisite to the study of mental disease and its more successful treatment. In the same line also may be mentioned the need of the establishment of reception hospitals in large cities or at least convenient to aggregations of population. It is now evident to all who have given the matter careful thought that special provision should be made for the prompt, effectual and scientific treatment of cases of acute insanity. In the larger States where a few hospitals for the insane exist, often located with regard to the geographical center rather than to the center of population of the State, much valuable time is lost in conveying a patient suffering from acute excitement from his home to the nearest hospital for the insane. In some instances, too, institutions have been located with reference to what may be considered the political center of the State. In Kansas, for example, both State institutions for the insane are in eastern Kansas, about seventy miles from each other. To transport an insane man or woman from the western to the eastern portion of the State to reach either institution often involves a journey of six or seven hundred miles with inevitable delays and the danger of exhaustion from the fatigue and the added excitement of the journey. In all States similarly situated provision should be made for detention hospitals or better for psychopathic hospitals, where the patient suffering from acute insanity could be placed as easily as he could be taken to a general hospital if he suffered from appendicitis and needed a prompt surgical operation. This, of course, would imply that such psychopathic hospital would have the right to retain the patient for a few days without embarrassing legal regulations or needless red tape. The detention must of course be temporary, and if the patient requires prolonged treatment, provision could be made to protect his legal rights by a formal inquisition into his mental state before he is transferred to a recognized institution for the insane. In too many instances patients suffering from acute insanity have found after a long journey to an institution that, possibly it was overcrowded and ill-adapted to the best treatment of their disease. A psychopathic hospital would enable the State or municipality to give prompt treatment to the case which could not with safety take the journey to the more formal hospital for the insane. Many persons have planned for such psychopathic hopsitals as adjuncts to general hospitals, but I fear such an association would prove profitable to neither. The care of the insane cannot well be undertaken by those who have not had a special training for it. The physicians and the personal attendants need to be familiar with duties which require a degree of patience and personal sacrifice almost incredible. The knowledge of the requirements of the insane, their modes of thought, their springs of action and their best and most judicious management can only be attained by a systematic association with them in an institution especially arranged for their care. They should be organized like general hospitals and placed under the charge of experts. In my judgment the next step in the successful treatment of the insane must be the establishment of such hospitals. In a State like New Jersey, with aggregations of population in so many prosperous manufacturing towns, one or more psychopathic hospitals would seem to be essential.

Another step which I regard of grave importance especially to the insane of the chronic class, is the assumption of the care of all classes of the dependent insane by the State. In the newer States of the Union such State care and responsibility have been accepted with great benefit to the dependent insane and to the State. State care permits of a definite and comprehensive policy free from the influence of local politics or the possibility of pinching economy on the part of those authorities whose standard of care for the insane has been derived from that of the poor in a county almshouse. Wherever the insane have been gathered into State institutions exclusively, we find that they are better housed, better fed, better treated by attending physicians, and vastly more comfortable from every point of view. The chronic insane should have more rather than less done for them, and in return they should do more for themselves.

It is interesting to recall that when Pliny Earle, of Northampton, made an address in 1867 upon the occasion of laying the corner stone of the hospital at Middletown, Conn., he emphasized as a new discovery the importance of employment in the treatment of the insane. It is suggestive of progress to note that what he considered almost unattainable as a therapeutic agency in the treatment of the insane has now become so common as to excite no remark. In fact the institution which does not furnish ample employment for its patients in trades, industries, farm colonies and other associated industries rather provokes remark. No better comment could be made upon the vast improvement in the relations of the insane to an institution than merely to call attention to this fact. With almost all of the chronic insane, industrial employment becomes a means of re-education whereby the mind, crippled by disease, is rendered capable of a fresh activity in safe channels under certain limitations and the process of mental deterioration and degradation is checked. To such impaired minds the life of the institution is rendered cheerful and homelike through occupation, and the victim of chronic disease grows in selt-respect and usefulness. Such re-education of the chronic insane may safely be undertaken in other directions by means of schools and technical instruction. The institution for the chronic-insane should not be an aggregation of hopeless, depressing disease but rather a hive of cheerful industry. The farm industries so graphically described a few months since at Central Islip, the institution for the chronic insane upon Long Island, furnish a most instructive object lesson as showing what may be accomplished by effort and proper enthusiasm. The record could easily be duplicated anywhere.

Greater attention, however, must inevitably be given to the differentiation of classes of patients. At present in many institutions we have acute and chronic cases, senile patients, epileptics, alcoholics and other habit cases, the criminal insane, who have been guilty of criminal acts, and insane criminals, all under treatment in different departments of the same large institution and often in fact crowded together in the same wards to the detriment of all classes. The patient who suffers from an acute form of insanity is not infrequently disturbed or depressed or confused by the proximity of patients who may excite apprehension or repulsion. On the other hand the quiet patient or the feeble apprehensive senile patient may be equally distressed by the active manifestations of an acute case or by the presence of one suffering from epileptic insanity in a violent form. Equally the precautions which are rendered necessary by the presence of patients of a criminal class may necessitate such a curtailment of the liberty of all as to interfere with the comfort and welfare of the whole institution. It consequently seems to me that one of the earliest problems before all institutions for the insane is such a differentiation and segregation of patients as will enable those who are charged with their care to sort them out and to put each class under the circumstances and surroundings which will be most favorable for comfortable living or ultimate cure. The chronic insane should as far as possible be given rural scenes and occupations. There is nothing so helpful for both sexes as occupation of such a nature as to build up about each one a little bulwark of routine which will exert the determining and governing force of the will power which has been lost by disuse or disease. Cases of senile decay should live in infirmaries where their lying down and their rising up may be carefully observed that they may receive at the hands of skilled nurses the watchful care required by a second childhood. The movement looking to the establishment of special institutions for epileptics promises to do much for the comfort of a most unfortunate class of patients who are not favorably placed in ordinary institutions and who need special buildings, special employment and a free open-air life. The necessity of separate accommodation outside of ordinary institutions for the insane criminal and the criminal insane is too obvious to be more than alluded to.

The time has come when one of the most crying evils of hospital management should be done away with. I refer to the political control of institutions for the insane and their so-called reorganization when political changes occur. The evil, I am sorry to say, seems to be extending at the west and south, and some States formerly free have within ten years come under the baneful influence of the idea that "to the victors belong the spoils" of the care of the insane, if there are any. (There never should be any.) In some States the idea has become firmly fixed in the popular mind that appointments, even to the humblest office, are perquisites of the Governor of the State. I know of one State where the newly elected Governor, in order that he might retain the services of his family physician, appointed him superintendent of the hospital for the insane, which unfortunately happened to be situated at the Capital City. In another State I have known twelve superintendents to be appointed to a single institution in eleven years. In still another an excellent superintendent was removed because he could not control votes enough for the party in power in the election of a United States Senator. By the wanton removal of faithful officers of institutions to make room for men whose qualifications have been political rather than professional, great damage has often resulted to the unfortunate insane, public funds have been wasted, the public conscience has been demoralized, and the growth and the development of the institution as a hospital for the care of the sick have been prevented. The present century must see the truth firmly established that political affiliations ought not be considered in seeking for the best men attainable for the conduct of scientific and humantarian work.

The suggestions which I have made seem almost like matters of detail in the re-arrangement and reorganization of our present admirable institutions or steps to the perfection of present methods of caring for the insane. They are of minor importance compared with the problems looking to the prevention of insanity which press upon us on every side and ask in vain for solution. What can the State do and what should she attempt to do to check the increase of insanity which seems to be an accompaniment of our modern civilization? When we consider to what degree insanity and nervous derangements leading to insanity, vice, poverty and crime are traceable to the intemperate and injudicious use of alcoholics, we are justified in the assertion that it is the duty of the State to regulate by law the widespread, indiscriminate and unrestricted use of an agent capable of doing so much mischief. Prohibition, high license, local option, the dispensary system, the Gothenberg system, and similar efforts to regulate the sale of alcoholics may be failures, and doubtless are failures in the majority of cases. I do not advocate any one of them because I confess the problem seems too difficult for present solution, but they mark a step in the right direction, the recognition of the duty of the State to do something for the protection of her own interests by checking an evil which directly and indirectly is responsible for the increase of insanity. An effort to regulate the sale of alcoholics by the State should be continued until some efficient method is devised for controlling the evil. Meantime the medical profession should endeavor to educate the public to recognize the scientific fact that the daily use of alcoholics by one who is in health is injurious and unnecessary. The young should be educated to do without alcoholics. The fact that large corporations, like railways and express companies, are able to enforce an abstinence from alcoholics among certain classes of responsible employes gives a gleam of hope that a concerted action among labor unions and employers of labor might do much in the same direction. Until some means for regulation are found, those who are interested in the well-being of the race should spare no effort to educate the public.

Similarly there should be a more careful control of the sale and use of narcotics and exhilirants, like cocaine and opium. The relation of opium and cocaine habits to the diseases of the nervous system should be re-investigated and the exact teaching of science should be ascertained to the end that proper views may reach every person upon these most vital topics.

In the light of our knowledge of the important part which heredity plays in the development of insanity, it seems essential also to give further study to the social aspects of insanity. These suggest questions of marriage, of education, of occupation, and of social usages which are of great importance and which clamor for further investigation and study. I can only allude to them in passing. The success which has attended the efforts which have been made to limit the spread of tuberculosis by the diffuson of correct knowledge as to its causes and mode of propagation, and the measures to be taken for the prevention and cure of tuberculous diseases, lead one to expect much from similar efforts to disseminate an adequate knowledge of the causes and prevention of insanity.

The future of psychiatry in America is bright with hope. The era of foundation and construction is nearly over; institutions have been evolved, developed and perfected; pathological institutes have been established and liberally equipped and supported; trained men with broad learning and technical knowledge have been raised up for special study, and an earnest spirit of investigation has been developed. We are on the threshold of new discoveries and important improvements in the treatment of the insane. In the better work of the new century we are confident that the medical officers of the New Jersey State Hospital at Morris Plains will be among the leaders.

THE TREATMENT OF INTERSTITIAL NEPHRITIS.*

By DOUGLAS C. MORIARTA, M. D.,

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Mr. President and Gentlemen:

The treatment of chronic interstitial nephritis is most important. Correct appreciation of the proper treatment of this condition means much to the practitioner, as well as to the one afflicted with the disease; for while one suffering with this malady is essentially doomed, yet a great deal can be done to defer the inevitable end and make him comfortable. Or perhaps it would be more accurately stated if we said that, with a true appreciation of the pathology of the disease, conditions may be avoided which would materially shorten the life of the one afflicted.

Before attempting to treat this disease, a positive diagnosis is essential, and while this is usually easy, as has been stated to-day, it is not always so; for often in the early stages of interstitial nephritis, when albumen is not present in the urine, the condition is not recognized.

The personal hygiene, manner of living, dress and diet are only secondary in importance to the diagnosis. So far as possible the patient thus afflicted should be free from business cares, either physical or mental, and one is certainly fortunate if so situated that the prescribed method of living can be followed. A dry, balmy, equable climate is preferable; and if we send our nephritic patients away to such a climate for the winter, they must not return until our spring has become settled. I have several times seen patients who were thus away return the last of March, instead of waiting until May or June. On the other hand, even if in this climate, patients who are comfortably situated at home should not be sent away unless they are sure of being provided with comfortable quarters, food, nursing, etc. Nothing is more distressing or harmful than to send patients in advanced stages of chronic disease away from comfortable homes and friends, expecting a change of scene and climate to do what is an impossibility; often the patient wanders about from place to place, endeavoring to find relief and comfort, which never come.

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*Read before the Medical Society of the County of Saratoga, September 19, 1901.

The patients should live a quiet, regular, out-of-door life, avoiding all fatigue, either physical or mental, as stated. Yet I believe it wise to direct as much exercise in the open air as their condition will permit. These patients should always wear all-wool or silk underwear, night and day, and also carefully protect their feet from dampness and cold.

The diet must be carefully considered and regulated. Many practitioners limit the amount, while others entirely prohibit the use of nitrogenized food, believing this to be the way to prevent the formation of excess of uric acid, as no more uric acid should form than can be eliminated if we would avoid the possible danger of uremia; particularly is this the case in interstitial nephritis, as the amount of uric acid excreted is diminished in this condition. All agree that in chronic nephritis it is important that the loss of albumen in the urine should be compensated for, though in interstitial nephritis this need not be considered, as the loss of albumen is always very small. If chronic uremia is present and manifested by headache, vertigo, vomiting and pathological urine, a pure milk diet is of great service when combined with rest in bed. The value of this diet in nephritis is too well known to dwell on; all concede it is the ideal one for the nephritic patient. Milk from its composition is a perfect aliment, and its diuretic action makes it a useful remedy. It must be taken in sufficient quantities to sustain the organism; if it is well borne, there is a prompt feeling of well-being, the digestive function improves. the urine increases, the headache and the albumen disappear and the whole economy is toned up. If the patient is on an exclusive milk diet he should drink from three to four quarts daily. Many times it is impossible to maintain a patient on an exclusive milk diet, as it soon becomes repugnant. This condition can be remedied in a measure by varying its mode of administration. It may be used either hot or cold, sometimes improved with a little salt, be given with Vichy, or peptonized, in junket, as buttermilk, skimmed milk, kuymis or as ice cream. There will be instances, however, where milk is poorly digested and not well borne; we must then help with light farinaceous food. Sometimes the patient cannot take sufficient food of any character. In grave cases, where the milk diet does not agree with the patient, we are obliged to choose between a general diet with the possibility of uremic poisoning which it may produce, and not nourishing our patient.

When the kidneys are secreting the proper amount of fluids and solids, a light animal diet with vegetables and cereals is admissible; while tea and coffee are usually interdicted, I can see no objection to a limited quantity of either. The amount of animal food allowed depends upon each individual patient's condition. Alcoholic beverages cannot be generally used, though at times they afford a grateful and necessary stimulation; malt liquors are objectionable, and the choice is some light wine which has only a small percentage of alcohol, such as Rhine wine, claret or a little dry champagne.

Drugs are of value in the treatment of this disease, but each case must be carefully studied and the exact pathological condition determined; then when the proper drugs are prescribed much good results; *per contra,* if this is not the case, the result is uncertain.

There are so many complications which occur in this disease and have to be met that the greatest accuracy is essential in observing these cases. The secretion of urine must be carefully measured, the amount of solids estimated, the arterial tension noted and the nutrition of the system carefully watched. As the cause of many cases of contracted kidney is the irritation of different poisons eliminated by the kidneys, we must always have this condition in mind when patients present themselves with headache, digestive disturbances, dyspnœa, or an extreme cardiac hypertrophy without valvular trouble. Polyuria, if of a low specific gravity, particularly if the patient is disturbed at night by being obliged to urinate once or twice, heavy feeders who do not exercise, alcoholics and gouty subjects, are proper cases for prophylactic measures.

These points must be observed not once but continuously; and in many instances under favorable circumstances we are enabled to prolong life indefinitely, and allow the patient many business and social pleasures. Though, as you are aware, a percentage of these cases of chronic nephritis run a rapid and unsubdued course in spite of all this, medicines and remedies seeming to have no effect, though the patient is able to accept every suggestion made.

A few drugs, such as the iodide of potassium, mercury, either as the bichloride, or calomel in small continuous doses, and tincture of muriate of iron, associated with the proper prophylactic measures, are useful in these conditions of chronic nephritis before organic changes become marked. It is well to have the possible etiology of the disease in mind when determining the drugs to be used at this time; to wit, if syphilitic, the iodides and mercury are useful; while if it is of a gouty origin, the alkalies, colchicum, iodide of iron and our local alkaline mineral waters are of much use. If due to metallic poisoning, the iodides come in again; while if associated with arterio-sclerosis, nitroglycerin, chloral or bromides are of value (and in this particular condition opium in some form has been suggested). The anæmia I have found many times markedly improved by the use of our local iron waters.

When an exacerbation occurs with mild uremic symptoms, the patient should go to bed at once and the bowels should be relieved by some saline cathartic, preceded or not by calomel, as may be determined. While the room is to be well ventilated, the slightest chilling of the surface of the body is to be avoided. A milk diet should at once be instituted and quantities of water given at regular intervals, either hot or cold, though hot water is better, and ice water never should be given. If the secretion of urine is scanty, cream of tartar water is of great service (one drachm to one pint) with lemon juice, as are also vapor baths. The condition of the heart and vessels should at once be determined to decide what, if any, drugs are indicated; at this time we must always have in mind the physiological action of such drugs, as digitalis, strophanthus, strychnia and nitroglycerine. If the attack does not clear up, the secretion of urine becoming less and œdema is present, we must act quickly or we will have coma and death, with or without convulsions. The heart must be carefully looked after, because, in these cases of suppression of urine, there is a secondary heart failure, often with dilatation, which calls for the cardiac stimulants mentioned, *i. e.*, digitalis, strophanthus, strychnia and caffein. Drastic purgatives, such as ten grains of calomel followed by thirty grains of compound jalap powder, are of use. The patient is to be placed in a wet blanket surrounded with hot water bottles; or with a little ingenuity, heat can be conducted under the bed-clothes from a lamp. In the winter season if steam is available it may be utilized in the same manner. This will usually start a sharp diaphoresis. Many practitioners at this stage employ pilocarpine hypodermatically, but personally it is the one drug I am afraid of, and I seldom use it.

This treatment and the diaphoresis must be continued for several hours, until the kidneys commence to act, if the patient is to be saved. When this process is finished, the patient should be carefully placed in fresh, warm blankets and rubbed dry with considerable friction to tone up the cutaneous circulation. If this is not done, the patient will be left in a weak sensitive condition, liable to take cold upon the slightest exposure. If convulsions occur, chloroform should be inhaled, morphia given hypodermatically and chloral by the rectum; if the right side of the heart is engorged, I believe a few ounces of blood from the arm may help out.

In conclusion, I believe that for the successful treatment of these cases it is essential that one should be familiar with the physiological action of his remedies, in addition to the thorough appreciation of the pathological condition of the patient.

WHAT SHALL BE DONE WITH THE PROFESSIONAL MIDWIFE?*

By MAURICE J. LEWI, M. D.,

Secretary of the New York State Boards of Medical Examiners.

Figures furnished by the Department of Health of the City of New York, show that during the year 1901, 80,735 births were reported, of which number 42,253 were reported by physicians, and 38,482 by midwives. The figures for the preceding years are very much the same as those just quoted.

Personal investigation through the medium of prominent physicians in the City of New York shows an undivided opinion based upon their experience that great evils are wrought to the community by reason of the incapacity and the negligence of these midwives.

It is a difficult matter to determine just how many cases of disease and deformity are properly chargeable to incompetency on the part of midwives at the bedside of the lying-in woman and at the birth of the child.

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*Read at the annual meeting of the Medical Society of the State of New York, January 28, 1902.

Suffice it, our hospitals and dispensaries are daily witnesses to the criminality which permits ignorant women to act as medical guardians at the birth of the child. The consensus of opinion which holds this ignorance responsible for the many cases of ophthalmia neonatorum, and of ruptured perineums and of lacerated ora uterorum, is a conclusion well worthy of recognition, for it is unbiased and is gleaned from the actual experience of scientific men who lead in their several specialties.

By reason of the public lack of knowledge of the subject it has ever devolved on the medical profession to correct sanitary and health abuses, and as heretofore the laity expects the profession of medicine through its accredited society or societies to point out the remedy when the law makers may be expected to act. The difficulty up to this time in consummating a correction of this abuse, and a mitigation of this suffering has been due to a lack of unanimity on the part of the doctors as to method and manner.

Those opposed to interference state: "If you legalize these midwives, you permit uneducated persons to practice a branch of medicine which practice requires more knowledge than the educated midwife can possess." The other faction has said: "Educate these midwives as they are educated in Europe, and there will be a mitigation of existing evils." The ideal method would of course be that which would make it legally necessary for one practicing midwifery to be possessed of the knowledge essential to practice medicine generally. But such a view is Utopian as long as the cities of this country are filled with a cosmopolitan population carrying with them to their new homes the old ideas regarding the need for midwives, and so long as no law other than a health board regulation, necessarily more honored in the breach than in the observance, is the only trip encountered by the would-be practitioner of midwifery, so long will there be women to be delivered by midwives in preference to doctors, and so long will there be midwives who are ignorant.

We cannot perch ourselves on an eminence and look down upon the world and say: "You must come to our views, you who are suffering because of these abuses." But those of the profession who have all along hoped that this reckless practice of midwifery should be corrected by legislation calling for an abandonment of midwifery practice, by all not licensed to practice medicine, must cease from hoping for such an outcome. We are confronted with a condition, not a theory. We know that the asylums for the blind are being crowded with children rendered sightless because of the neglect, criminal or otherwise, of these midwives. We know that dispensaries and hospitals are daily crowded with women who have been maimed and crippled because of the neglect or otherwise of this same class of people. We know that abortions are being daily committed by women advertising themselves as professional midwives. We know that the farming out of children is being carried on by means of this same class. Is it not high time that the medical profession of the State of New York should step in and demand an abatement of the conditions enumerated? Unitedly presenting our views to the legislature is it not reasonable to expect that the legislature would come to the rescue? And would not a mitigation of these evils bring credit to the medical profession, if through its initiative this reform were accomplished?

And just as we would be honored for bringing this to pass, so are we to-day discredited, not by the laity, for they do not understand the situation, but by the thinking part of the profession which feels that each blind child, rendered so by failure on the part of the profession to intelligently regulate the practice of midwifery, is a crime for which the profession is responsible.

To quarrel about details thereby preventing the consummation of a corrective law, is as wrong as it would be for the various religious sects to quarrel with one another as to their creeds at the portals of heaven. The remedy:

Let the profession unite in petitioning the legislature to pass a law that on and after a given date no person shall be permitted to practice midwifery unless "previously" registered as having attended at least ten cases of confinement; who is not licensed so to practice after examinations to be conducted on given topics, under rules and regulations to be formulated by the Regents of the University of the State of New York, or by the State Board of Health, as you will.

The verbiage of this bill could be simple and still effective. It need not take up more space than a stick in a newspaper column.

This cavilling as to whose function it is to attend cases of this character, the plaint of the sentimentalist in medicine that the profession is being insulted by recognizing legally those who carry on this practice, and all other fancies, should be set aside and the great thought kept in mind that the public is entitled to a better condition of affairs, and that crime and physical wreck in the name of midwifery should cease.

149 WEST 85TH ST., NEW YORK CITY.

Clinical and Pathological Notes

Varicella in the Adult, with Report of a Case. By GEORGE E. BEILBY, M. D., *Resident Physician, State Industrial School, Rochester, N. Y.*

The extreme rarity of this condition and its diagnostic importance makes justifiable the report of a case. Smith[1] and Jennings[2], both writers of large experience, have each observed only a single case, while Baader[3], in analyzing a series of five hundred eighty-four cases, states that only two, at least, were over the age of twenty, these being questionable. Others go so far as to say that the condition is never seen in adults, all of the supposed cases being in reality mild manifestations of variola. Among recent writers, Doty[4] reports two cases occurring in typical forms, and states that the prevalent belief that varicella does not affect adults is erroneous.

The case which I have to report occurred during a small epidemic at the State Industrial School, Mr. C. J. F., aet. 24, night guard. He had the other diseases of childhood when young, and did not consult me until the eruption was well out, his attention having been called to it by its appearance on the face. He states, however, that two or three days previously he noticed a few "spots" on the back and shoulders, and he had headache and slight malaise, but thought nothing more of his condition at that time. The eruption was very typical: its abundance on the back, shoulders and chest, freeness from the extremities, there being none on the hands or feet, and the specific character of the macule and vesicle made the diagnosis unmistakable. The vesicles were large, superficial and unilocular; smooth and delicate to the touch, and most of them surrounded by slight areolæ. A few large ones were noticed on the legs, with no areolæ, bullous in appearance, as Holt says, resembling a drop of water upon healthy skin. The eruption occurred in successive crops, so that in the same locality were lesions in all stages of development and decay. The pharynx was red and two pocks were seen on the soft palate, and one on the buccal mucous membrane having the appearance of a follicular stomatitis. The eruption pursued a regular course, and had entirely disappeared in three weeks, with the exception of a few dry brown crusts on chest and face. One rather large lesion on the face was a week longer in healing and left a perceptible pit.

The point I wish to emphasize in reporting this case is that while varicella is uncommon in the adult, its possibility must not be forgotten. To regard it as a disease exclusively of infants and children, and make this a distinguishing point from variola, might involve one in serious trouble. As yet, the specific germ has not been isolated, and until such is the case we should rely solely on the appearance of the eruption in making the diagnosis, regarding of secondary importance the mode of onset and constitutional symptoms. The distinctive features in the eruption of this case, and those which I believe can always be relied on in differentiating this condition from smallpox, might be summarized as follows: (1) its appearance first on back and chest, being most abundant in these localities, later extending to the limbs and face; (2) entire absence from the soles and palms; (3) evolution in successive crops, so that in the same locality were macules, vesicles and crusts; macules small and rose-colored, never becoming distinctively papular; vesicles varying in size, not umbilicated, containing only clear, transparent serum, readily collapsing when ruptured, and surrounded by very slight, or no areolæ; (4) appearance of pocks on mucous membrane; (5) crusts exfoliating in from five to twenty days, as a rule leaving no scar.

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2. *Cyclopædia of Diseases of Children*, Keating, Vol. 1, page 756.
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4. *Medical Record*, Vol. 59, page, 695.

Correspondence

"WHY OSTEOPATHY?"

Ἐκ σκότου μὲν ἔξαγε φάος

To the Editors:

Among the editorials in the February number of the ANNALS you have presented one, labelled—"Why osteopathy?" I read it with some interest as the subject of the numerous pathies, which are constantly springing up around us, is of some sociological importance and is certainly worthy of two pages of editorial space.

Your editorial directs our attention to the barbarity of the present method in which drugs are given out, indiscriminately by the medical profession, and without being properly tested by reliable authorities. You then propose more rational methods of treatment, and predict with this a death of all the pathies.

In taking this sanguine view you have overlooked certain factors which have a bearing on the case. A very important one is, that as long as patients die from sickness, their friends will be more or less dissatisfied with the result of the treatment—no matter how "rational" the treatment may have been. Likewise, as long as there are patients with incurable diseases, no matter how hopeless, they and their friends will always welcome any chance of recovery. It is true, that some of these friends and patients we can satisfy with repeated assurance of the rational and physiological nature of our therapeutics; but, on the other hand, there are some who refuse to be content. It is these discontents that fall easy prey to the alluring promises of fraudulent "irregulars." Now, since it is probable that we shall always have rapidly fatal diseases as well as protracted and incurable ones, in spite of the most approved drug skepticism on the part of the medical profession, and the use of the best of physiological therapeutics, we shall always, therefore, have a certain number of discontents. It is this class of people that I wish to point out as a sufficient etiology in perpetuity for osteopathy and the like—a continuation rather than any repetition of history.

Among the other causes we might mention our hereditary tendency toward mysticism and the curious. This seems more especially prevalent among those of nervous temperament, and it may therefore in some degree account for the large occurrence of these pathies among the higher classes.

As to your sharp attack on drugging, it is possible that we merit it; but it would have been more conclusive if you had cited reported cases of untoward and harmful results from the use of these doubtful remedies which are flooding the market, instead of drawing inferences from that which we may only call industry and modern ideas on the part of drug houses and chemists.

Certainly, however, in view of the above, it would seem very hasty and immature to expect a "natural death of new born pathies" to follow drug scepticism. PRACTITIONER.

Our correspondent has brought out very satisfactorily certain aspects of the subject which we did not touch upon. We certainly do not expect the immediate death of all the pathies when a system of rational therapeutics is established. The natural death of the immature and feeble, with which we compared the hoped for death of pathies, is not always immediate. Some of them die in old age, they are very much in the minority, most of them die in youth. In our editorial we merely called attention to what we believe to be one of the main factors leading to their careful incubation by a gullible public.

We recognize fully with our correspondent the various factors that play a part in the support of the various pathies by the public. We failed to mention them particularly in our editorial because we were especially struck at the time we wrote it with the similarity between the rise of homeopathy and the rise of osteopathy. We believe that pathies or something corresponding to them will always exist, but we also believe that more strict attention to rational therapy will cause a greater infant mortality among them.

With regard to our correspondent's remarks on drugging, we do not consider the editorial column the place to cite individual cases, but would refer him to the medical press where he will find instances recorded of ill effects from various proprietary compounds. For obvious reasons only a minority of such cases are reported. Even were such compounds harmless, which in many instances would be very difficult to prove, we cannot see in these days of accurate observation any justification for their use until properly tested.

Our correspondent's ideas regarding mysticism are also exploited in James Creelman's new book, "On the Great Highway," in which is the added value of the layman's point of view. During the balloon journey described in Chapter XIX, the balloonist philosophizes as follows:

> "It's funny how people rush to see a balloon ascension," he said. "It isn't the love of science that stirs them up, for any man that isn't a blithering idiot knows that you can't steer a balloon in a strong wind any more than you can force a full-rigged ship, with all her sails set, against a hurricane. If you could get a motor powerful enough to do it, the envelope of the balloon would collapse. No; men and women are still savage enough to enjoy the sight of human beings going to their death. It's the mystery of the thing that catches them. But it isn't only aeronauts and mesmerists who profit by the mystery in their business—doctors, preachers, poets, and all that tribe which lives on the borders of the unknown, live on mystery. There are thousands of fools looking up at us from the earth, and shuddering at terrors of their own imagination, while we sit here as safe and quiet as you please, and laugh at them. * * * When I was a tailor nobody cared a tinker's damn for me; but when I became a mesmerist and a balloonist I was a person of consequence, although my life was not a tenth part as useful as when I worked at my trade. I've had an offer to lecture in the small towns on an electric belt that cures all sorts of diseases. There's mystery and money in the business, and I'm going to accept. The world likes to be tricked if it can be tickled at the same time. I'll call myself Professor Something-or-other—you must keep a straight face when you bamboozle them; you'll find that out in time."

It cannot be denied that love of mystery and credulity in occultism exist, that these are the essential elements of quackery, and that they will continue to exist as long as a human race whose moral fabric is erected upon a foundation no more material than faith.

Disappointed and skeptical patients will indulge what vagaries of treatment they prefer, and the physician may not prevent, and perhaps it is best that he should not prevent, this indulgence. But balloonists, mesmerists and fakirs, and all the representatives of all "pathies" should be the recognized agents of questionable ministrations, and the contrast between them and the physician should be most sharply drawn. The true physician, even though deserted when his resources fail, must still stand as the disciple of truth. When medicine can no longer survive by its intrinsic worth, but must compromise with charlatanry, then should all honorable men seek a calling in some other field.

Editorial

> The fourteen doctors who deliberated on the King's case contradicted each other and themselves. Some of them thought that his fit was epileptic, and that he should be suffered to have his doze out. The majority pronounced him apoplectic, and tortured him during some hours like an Indian at a stake. Then it was determined to call his complaint a fever, and to administer doses of bark. One physician, however, protested against this course, and assured the Queen that his brethren would kill the King among them. Nothing better than dissension and vacillation could be expected from such a multitude of advisers. But many of the vulgar not unnaturally concluded, from the perplexity of the great masters of the healing art, that the malady had some extraordinary origin. There is reason to believe that a horrible suspicion did actually cross the mind of Short, who, though skillful in his profession, seems to have been a nervous and fanciful man, and whose perceptions were probably confused by dread of the odious imputations to which he, as a Roman Catholic, was peculiarly exposed. We cannot, therefore, wonder that wild stories without number were repeated and believed by the common people. His Majesty's tongue had swelled to the size of a neat's tongue. A cake of deleterious powder had been found in his brain. There were blue spots on his breast. There were black spots on his shoulder. Something had been put in his snuff-box. Something had been put into his broth. Something had been put into his favorite dish of eggs and ambergrease. The Duchess of Portsmouth had poisoned him in a cup of chocolate. The Queen had poisoned him in a jar of dried pears. Such tales ought to be preserved; for they furnish us with a measure of the intelligence and virtue of the generation which eagerly devoured them. That no rumor of the same kind has ever, in the present age, found credit among us, even when lives on which great interest depended have been terminated by unforseen attacks of disease, is to be attributed partly to the progress of medical and chemical science, but partly also it may be hoped, to the progress which the nation has made in good sense, justice and humanity.
>
> MACAULEY.
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> **The History of England.**
> **The Death of Charles the Second.**

The Bacteria of Schools

The hygiene of schools has attracted desultory attention from time to time, and during the last few years scattered contributions have been made, touching upon ventilation, heating, lighting, hours of study and exercise. In the *Centralblatt fur Bakteriologie,* November 17, 1901, ERNESTO CACACE gives the result of a definite and suggestive bacteriological inquiry. Cacace remarks that outside of a few observations in Germany and England very little attention has been paid to the bacteriology of schools. His investigations took the form of examinations of dust from various parts of a normal school at Capua at various times of the year. The writer investigated particularly the number and variety of bacteria, the influence of different months of the year and of the presence of the pupils on their development, the occurrence of pathogenic bacteria, particularly tubercle bacilli, and the suggestions for improved school hygiene to be drawn from the results. The school was several stories high, and contained some three hundred pupils of different grades from the kindergarten up. The dust was examined, both culturally and by animal inoculation.

Besides blastomycetes and moulds many bacteria were found, the pathogenic ones most commonly present being the *bacillus coli communis,* and the *staphylococcus aureus* and *albus.* The pneumococcus was only once observed and then in an inoculation experiment. The colon bacilli were usually virulent for animals. The number of bacteria per gram of dust varied from 6,500,000 to 103,000,000. The largest number was constantly found in the kindergarten department, which was on the ground floor and opened on a dusty street. The development of bacteria was about the same in the different departments. They developed more rapidly in June than in any other month. The dust was richer in bacteria by from two to five millions at the end of a session than at the beginning. As far as animal injections were concerned it was found that none of the animals died of tetanus, and that no tuberculosis developed in any of them.

As a result of these observations the author suggests that thorough cleaning of all school rooms by scrubbing of the floors, and the use of a moist cloth on the furniture should be frequent, and that the rooms should be chemically disinfected at stated intervals. On account of the greater susceptibilty of young children the kindergarten department should not be on the ground floor or open on a dusty street.

Scientific Review

SOME ASPECTS OF THE PATHOLOGY OF THE PANCREAS FROM THE STANDPOINT OF RECENT INVESTIGATION.

It is proposed in this review to take up from the standpoint of the more recent work: (1) the relation of lesions of the pancreas to diabetes; (2) the conclusions to be drawn from recent studies of acute hemorrhagic and suppurative pancreatitis as regards the etiology of these conditions and their relation to gall stone disease, chronic interstitial pancreatitis and fat necrosis.

Our knowledge of the results of disease in an organ is necessarily dependent on our knowledge of the intimate structure and function of that organ. In the consideration of diabetes particularly, it is necessary to remember that the pancreas is a much more complicated structure than the salivary glands which it resembles. The well-known researches of Langerhans showed that the pancreatic tissue contains two distinct classes of parenchymatous structure, the ordinary gland acini which secrete the digestive juices of the organ and empty into the pancreatic ducts, and the so-called Islands of Langerhans, which differ in appearance and structure from the ordinary gland acini. Ssobelew, Opie and others have shown that though we have every reason to believe that the Islands of Langerhans have the same origin as the ordinary gland tissue, during extra-uterine life they have no connection with the secreting portion of the gland. Opie shows that they have no connection with the excretory ducts of the organ, and that their cells are in intimate relation with the blood supply, each island being furnished with a vascular arrangement somewhat similar to that of a kidney glomerulus. Without going deeply into the subject of the relation of the pancreas to metabolism, we would simply remark that the relation of the organ to carbohydrate digestion suggests that it possesses an internal secretion. Schafer and Diamase first suggested that it is the Islands of Langerhans which provide this secretion, a view of which is strongly upheld by Ssobelew and Opie.

The modern conceptions of the relation of the pancreas to diabetes date from the classical experimental work of v. Mering and Minkowski. The observations of these workers, since abundantly confirmed, showed that in dogs the total extirpation of the pancreas regularly gave rise to a disease resembling in every way diabetes mellitus as seen in the human subject. Some writers, as Reale and de Renzi, could not confirm the statement that these symptoms followed in all cases, but practically all competent observers concede their occurrence in the great majority of dogs from whom the pancreas has been removed. Experimental work by various authors has likewise shown that partial extirpation is followed by glycosuria or a mild form of diabetes, an indication that in man also mild grades of diabetes may be due to pancreatic disease. When from one-fourth to one-fifth of the gland is left no glycosuria ensues. That the experimental diabetes following total extirpation of the pancreas is not due to the injury to neighboring nervous structures is shown by the fact that its development can be hindered by the transplantation of pancreatic tissue beneath the skin of the abdominal wall. Inasmuch as in these cases the normal secretion of the pancreas is not discharged into the digestive tract, this also shows that diabetes is not due to a lack of the pancreatic juice, and renders probable the supposition that besides the pancreatic juice the pancreas furnishes an internal secretion.

Satisfactory as are these experimental data, many puzzling problems confront us in the study of the pancreas in human beings who have come to autopsy after death from diabetes. Leaving aside those cases which are evidently due to lesions in the medulla, we find that the study of the pancreas in the remaining cases shows two groups of cases which are difficult of explanation. On the one hand we have a good many cases of diabetes without perceptible pancreatic lesion, and on the other, cases of complete destruction of the pancreas without diabetes.

Of eighty-eight cases of diabetes collected by Hansemann, Bloch and Oser, twenty-eight showed no demonstrable pancreatic lesion. These same writers collected 139 cases of extensive pancreatic disease without diabetes.

The recent work of Ssobolew, Wright and Joslin, and particularly of Opie, throws a good deal of light on the apparent contradictions which these figures suggest. It is undeniable that in their microscopic studies of the pancreas the earlier writers paid little attention to the condition of the Islands of Langerhans. If, as is now supposed, these structures play an important part with regard to the internal secretion of the pancreas, it becomes at once apparent that their condition is of extreme importance. The work of Opie, and of Wright and Joslin has, in fact, shown that in a certain proportion of cases of diabetes the Islands of Langerhans are extensively changed, whilst the great mass of the gland is to all intents and purposes normal. I have myself recently studied a pancreas from a case of diabetes kindly sent me by Dr. Libman, of New York, in which practically the only change found in the organ was the hyaline degeneration of the Islands of Langerhans described originally by Opie. Is it not fair to presume that in a certain proportion of the cases described by the older writers as without pancreatic lesion these changes were present? The experience of Wright and Joslin, who found such changes twice in nine cases, would indicate, however, that all such observations cannot be explained in this way; the recent work of Schmidt would also indicate this.

The work of Opie on interstitial pancreatitis also explains why in this class of cases very extensive destruction of glandular tissue may occur without diabetes. He classifies interstitial pancreatitis into an interlobular and an interacinar form. In the interlobular, even where the disease has involved the greater portion of the origin, the Islands of Langerhans are not involved. In the interacinar form they are gradually encroached upon and destroyed by the new-formed connective tissue, but even here it is only late in the disease that they become extensively involved.

Some of the cases in which to the naked eye there is apparently complete destruction of the pancreas by a neoplasm and yet no diabetes, have been shown under the microscope by Hansmann particularly, to still contain areas of pancreatic tissue, but whether in such cases the Islands of Langerhans are especially spared yet remains to be shown. In other instances where the complete replacement of pancreatic tissue by new growth is demonstrated, both macroscopically and microscopically, and yet diabetes does not occur, explanation is more difficult. Hansemann has advanced the idea that the tumor cells, being direct descendants of the pancreatic cells, inherit from them the power of elaborating an internal secretion. Oser does not consider this theory convincing, but after all it does not seem so far-fetched, inasmuch as we are already acquainted with instances of tumor cells elaborating secretions of the character of those supplied by the organs from which they sprang. Niedrich, Bock and Thoma have all described metastatic adenomata of the liver in which a substance resembling bile was secreted by the tumor cells. In Bock's case this substance was chemically examined and found to contain large quantities of biliverdin. It would be interesting to observe in pancreatic tumors whether any type can be differentiated, which has the appearance of originating from the cells of the Islands of Langerhans, rather than from the glandular structure or the epithelium of the ducts. It would seem possible that the question of the production of an internal secretion by the cells of pancreatic tumors could be cleared up by the physiological chemist.

It seems evident that the study of the Islands of Langerhans in diseases of the pancreas, and diabetes particularly, is yet in its infancy, or at least its childhood, and it is reasonable to hope that further study will render still clearer this hitherto obscure field.

The subject of the relation of the various forms of pancreatitis to one another, and to various etiological factors, has, until recently, been more or less obscure, and has given rise to numerous hypotheses. Leaving aside metastatic suppurative pancreatitis, which is obviously the result of a general septico-pyæmic condition, the various authors writing on primary pancreatitis have had before them for elucidation the following problems:

The relation of pancreatitis to bacterial action and to chemical irritants;

The relation of pancreatitis to gall stone disease;

The relation of hemorrhagic pancreatitis to suppurative and necrotic pancreatitis;

The relation of all forms of acute pancreatitis to chronic pancreatitis and to fat necrosis.

It is obvious that in order to trace the mechanism of the various processes under consideration, step by step, the experimental method had to be resorted to.

Injection of various bacteria, either into the duct of Wirsung or into the parenchyma of the pancreas, has resulted in many instances in pancreatitis, rarely hemorrhagic, generally suppurative or of a chronic inflammatory character. Various micro-organisms have produced these effects, the most important being the diphtheria bacillus (Hlava; Flexner), the colon bacillus (Hlava), and the bacillus pyocyaneus (Flexner). These experiments merely indicate the possibility that in some human cases an ascending infection by means of the pancreatic ducts may account for certain forms of pancreatitis.

The production of pancreatitis by means of chemical irritants dates back to the time of Claude Bernard, who produced experimental suppurative pancreatitis by the injection of quicksilver into the ducts. Since his time various chemicals of an irritant nature have been injected by various observers. Korte used turpentine, Carnot chloride of zinc, and Katz and Winkler sulphuric acid. This aspect of the subject was mostly thoroughly worked out by Flexner, who used a large variety of irritating chemicals, some acids, some alkalies, and still others intensely irritating substances, such as formalin. The results of these various experiments may be briefly summed up by stating that all forms of pancreatitis were produced by the action of one or the other of the chemicals used.

Regarding the relation of chemical irritants to human pancreatitis, a step in the right direction was taken by Hlava when he suggested that in individuals with a hyperacid gastric juice this might be carried up the pancreatic ducts by anti-peristaltic movements and set up pancreatitis. He, as well as Flexner and Carnot, showed that artificial gastric juice injected into the ducts produced well-marked pancreatitis. In spite of the attractiveness of Hlava's theory, the chances that such a mechanism can occur in human beings seem extremely slight. Nevertheless, the principle that pancreatitis in human beings can be produced by the introduction into the pancreatic ducts of chemical substances normally secreted by the body cells has recently been placed upon a firm basis by Opie.

Opie's observations were based upon a patient with gall stones in whom a hemorrhagic pancreatitis developed. At autopsy it was found that a small stone lodged in the ampulla of Vater had blocked the orifice of that portion of the duct common to the bile and pancreatic juice, but had not shut off the lower end of the common bile duct or of the pancreatic duct. As a result of this the bile and pancreatic ducts formed a continuous passage, the latter duct showing evidences that bile had been present in it in the form of bile staining, a result which, as Opie has pointed out, might be expected on account of the fact that the bile is under greater pressure than the pancreatic juice. As a result of this observation, as well as of the knowledge of the quite frequent association between gall stones and pancreatitis, Opie conceived the idea that bile is capable of setting up a hemorrhagic pancreatitis. A study of the literature of the pathology of hemorrhagic pancreatitis showed that the majority of the recently reported cases showed gall stones, and the anatomical relations of the two ducts are known to be such that a small stone in the ampulla could, in a certain percentage of cases, block the external orifice in the papilla without obstructing the intestinal end of either duct. Opie's suggestion that bile could set up hemorrhagic pancreatitis was proved experimentally by himself, and has since been confirmed by Flexner.

The great point of dispute regarding the relation of hemorrhagic lesions of the pancreas to inflammatory lesions has been with regard to the priority of the two processes. Until the recent work of Flexner and Pearce, the question as to whether the hemorrhage or the inflammatory processes occurred first has been in doubt. The experiments of these authors show without doubt that hemorrhagic, degenerative and inflammatory lesions are all correlated; the several phenomena may all occur at the same time, and that only a few hours after the action of the irritant. The experiments further show that the presence of blood alone in the pancreatic tissue is incapable of setting up inflammatory reaction.

The relation of these various forms of acute pancreatitis to chronic insterstitial pancreatitis can be summed up in a few sentences. Both experimental and post-mortem observations seem to show that when animals or individuals recover from the direct effects of the inflammation produced by the various irritants discussed, the connective tissue of the pancreas proliferates, new formed connective tissue is produced and a chronic induration of the organ results. There seems no doubt that in many cases of cholelithiasis a quantity of bile insufficient to cause extensive lesions frequently escapes into the pancreas, and that the well-known induration of the head of the pancreas, which has been so frequently observed by surgeons in gall stone operations, is the result. In one case at least Mayo Robson has demonstrated this on the post-mortem table.

There remains for our consideration the subject of fat necrosis and its relation to these various processes.

The more prominent of the older theories regarding the formation of this form of cell death assumed the lesion as due either to the action of bacterial products or to that of trypsin.

The relation of bacteria to fat necrosis has been most carefully studied within the last year by Marx. He concludes that the evidence against the production of fat necrosis by bacteria is very strong. The presence of micro-organisms in fat necrosis is inconstant, and those generally found are organisms known to occur in the tissues post-mortem. Furthermore, attempts to produce fat necrosis experimentally, by means of bacteria or their products, have been almost uniformly unsuccessful. The results of experimental work with trypsin have likewise been many of them negative. It can now safely be said that the demonstration that the action of steapsin, the fat splitting ferment of the pancreas, is the true cause of fat necrosis, is convincing. The presence of this ferment in the lesions of fat necrosis was first demonstrated by Flexner, and his observations have since been confirmed by Opie and others.

The histology of those lesions has also been carefully worked out in this country by Williams, Flexner and Opie. The lesion consists in a splitting up of the fat into glycerine and fatty acids, the former being absorbed, the latter entering into combination with lime salts to form a soap. Surrounding the area of necrosis is found a zone of inflammatory reaction of the tissues. Whilst these researches do not absolutely reveal the mechanism of the distribution of the steapsin, which may act on fat so distant even from the pancreas as the pericardial fat, they simplify greatly the relationship between disease of the pancreas and fat necrosis in that they show that any pancreatic lesion which allows of the escape of the fat splitting ferment may give rise to fat necrosis.

GEORGE BLUMER.

References to the more important work bearing on the subjects discussed may be found in the following articles:

FLEXNER. *The Journal of Experimental Medicine*, Vol. 2, No. 4, 1897.
The Johns Hopkins Hospital Reports. Vol. 9 (*Welch's Festschrift.*)
FLEXNER AND PEARCE. *University of Pennsylvania Medical Bulletin*, Vol. 14, No. 6.
OPIE. *The Johns Hopkins Hospital Bulletin*, Vol. 12, Nos. 121-122-123, 1901, and *The Johns Hopkins Hospital Reports*, Vol. 9 (*Welch's Festschrift.*)
The Journal of Experimental Medicine, Vol. 5, Nos. 4 and 5, 1901.
The American Journal of the Medical Sciences, January, 1901.
OSER. *Die Erkrankungen des Pankreas—Nothnagel's Specielle Pathologie und Therapie*, 1899.
MARX. *Virchow's Archiv.*, Bd. 165, Heft 2, 1901.
WILLIAMS. *Boston Medical and Surgical Journal*, April 15, 1897.

State Medicine

IMPORTANT MEDICAL BILLS IN THE NEW YORK LEGISLATURE.

Senate Bill No. 207. Introduced by Mr. Davis, January 20, 1902, and referred to Committee on Finance. Assembly Bill No. 310. Introduced by Mr. Fisher, January 21, 1901, and referred to the Committee on Public Health. An Act "To amend chapter four hundred and sixteen of the laws of nineteen hundred, entitled 'An act to establish a state hospital in some suitable location in the Adirondacks for the treatment of incipient pulmonary tuberculosis, and making an appropriation therefor,' in relation to the reception and maintenance of free patients."

The object of this amendment is to provide for the return to their place of residence of patients who are found not to be suffering from incipient tuberculosis or are suffering from an advanced stage of pulmonary tuberculosis where no benefit could be derived from the hospital. The expense of transportation to and from the hospital shall be paid by the local authorities who sent the patient. The bill further provides that the local authorities shall pay the comptroller for the examination, care, treatment and maintenance of patients unable to do so. The rate is not to exceed five dollars a week.

Senate Bill No. 209. Introduced by Mr. Marshall, January 21, 1902, and referred to the Committee on Public Health. An Act "To preserve the public health and to prevent accident and mistake in handling the poison."

This bill looks as if it was framed to promote the interests of some inventor of a patent poison bottle.

Senate Bill 242. Introduced by Mr. Davis, January 22, 1902, and referred to the Committee on Finance. This bill passed the Senate, February 7th. An Act "Making a reappropriation of money heretofore appropriated for establishing a state hospital for the treatment of incipient pulmonary tuberculosis."

This reappropriates the sum of fifty thousand dollars which was allowed in nineteen hundred for the purpose of purchasing a site and of erecting, constructing and equipping a state hospital for the treatment of incipient pulmonary tuberculosis.

Senate Bill No. 297. Introduced by Mr. Slater on January 28, 1902, and referred to Committee on Agriculture. Assembly Bill No. 528. Introduced by Mr. Graeff. An Act "To amend the agricultural law, in relation to acids and other harmful substances in food products."

This act prohibits the addition of any substance containing formaldehyde, salicylic acid, or other harmful substance to any dairy or other food product.

Assembly Bill No. 479. Introduced by Mr. Brill, January 29, 1902, and referred to the Committee on Public Health. An Act "To amend the public health law, relative to the practice of veterinary medicine and surgery."

This is simply to allow any person who practiced veterinary medicine and surgery for a period of five years prior to June 1, 1895, the right to receive a state license. The old law required each applicant to be a graduate of a veterinary college, so this bill appears to be in the interest of some non-graduates who desire a state license.

Assembly Bill No. 450. Introduced by Mr. Brill, January 29, 1902, and referred to the Committee on Public Health. An Act "To amend the public health law, relating to local boards of health."

The term of office for members of the boards of health in towns shall be two years instead of one.

Assembly Bill No. 630. Introduced by Mr. Fancher, February 5, 1902, and referred to the Committee on Public Health. An Act "To amend the public health law, relative to the sale of certain drugs in original packages, by merchants and retail dealers."

This is to allow merchants and retail dealers to sell carbolic acid, laudanum, spirits of nitre and quinine in original packages labelled and put up by a regularly licensed pharmacist. This bill is a step backward—not forward.

Assembly Bill No. 653. Introduced by the Committee on Public Health, February 5, 1902. An Act "To amend the public health law, relative to admission to examination in certain medical studies."

This bill was introduced at the instigation of the Board of Regents and the Medical Society of the State of New York. It allows as the eqivalent of the first year of the four years' prescribed medical course, evidence of graduation from a registered college course. The regents can also admit applicants nineteen years of age to the preliminary examination in anatomy, physiology, hygiene and chemistry.

Assembly Bill No. 612. Introduced by Mr. McCullough, February 5, 1902, and referred to the Committee on Public Health. An Act "To amend the public health law, and the acts amendatory thereof, in relation to the practice of dentistry."

This is to allow men who have practiced dentistry for five years prior to August 1, 1895, to receive a license from the Board of Regents. A bill similar in many respects was introduced in the senate by Mr. Wilcox on January 16th. These bills are probably introduced for the benefit of certain individuals who have not the necessary educational attainments required in the old law.

Senate Bill No. 428. Introduced by Mr. McCabe, February 10, 1902, and referred to the Committee on Public Health. An Act "To amend section two hundred chapter six hundred and sixty-one of the laws of eighteen hundred and ninety-three, authorizing and empowering the state board of health and local boards of health to require vaccination or revaccination."

This bill, which will receive great opposition from anti-vaccinationists repeals the existing law—which by the way is excellent if enforced—provides as follows: The board of health of each city or town shall furnish the means of vaccination or re-vaccination to all inhabitants, and shall require and enforce such vaccination or re-vaccination whenever in their opinion the public health and safety require such action.

Pupils or students cannot be admitted in any seminary, college or university without the certificate of a registered physician to the effect that he has successfully vaccinated the applicant within five years or twice vaccinated without success.

Inmates of almshouses, prisons, jails, etc., are to be vaccinated or revaccinated when the local board of health demands it.

No person can be enlisted in the national guard who has not been successfully vaccinated within a period of five years.

No person or corporation employing ten or more persons can have in their employ any person without a physician's certificate of vaccination.

All persons and laborers engaged in the performance of public or municipal work must be able to show a certificate of vaccination.

Any violation of the preceding paragraphs is punishable by a fine of not less than fifty or more than one hundred dollars.

Senate Bill No. 431. Introduced by Mr. Grady, February 10, 1902, and referred to the Committee on the Judiciary. An Act "Relative to the liability of hospitals."

This bill was introduced last year and did not pass. It relieves hospitals from liability in cases of negligence on the part of its employees and others. This bill is open to some objections. If a hospital had no responsibility in the acts of people in its employ, or attached to it, it would not use so much care in its choice of nurses and physicians. The result would be detrimental to the patients. It would make suits for damages against doctors and nurses more numerous. Last year it was thought the intent of this bill was to make the doctors and nurses the scapegoats for negligence on the part of the hospital authorities.

Public Health

Edited by Joseph D. Craig, M. D.

Department of Health—City of Albany, N. Y.

Abstract of Vital Statistics, January, 1902

Deaths

Consumption	20	Albany City Hospital	8
Typhoid fever	2	Homœopathic Hospital	5
Diphtheria	3	County House	4
Pneumonia	9	Penitentiary	1
Broncho-Pneumonia	3	Little Sisters of the Poor	1
Apoplexy	12	Albany Orphan Asylum	1
Bright's disease	14	Public places	2
Cancer	7	Sacred Heart	2
Accidents and violence	6		
70 years and over	31	Total deaths	140
1 year or under	10		
St. Peter's Hospital	2	Death rate January, 1902	15.84
Births	141	*Marriages*	55

Deaths, 1901	188
Rate, 1901	22.14

DEATHS	1901	1902
Scarlet fever	2	0
Erysipelas	1	0
Diphtheria	7	3
Pneumonia	19	3
Apoplexy	19	12
Bright's disease	18	14
Seventy years and over	41	31

CONTAGIOUS DISEASES REPORTED.

Typhoid fever	9	Measles	12
Scarlet fever	5	Whooping cough	1
Diphtheria	46	Consumption	0
Chicken pox	5		

BENDER LABORATORY REPORT ON DIPHTHERIA TESTS.

Initial, positive	Initial, negative	Final, positive	Final, negative
26	107	46	40
		Total	219

DIPHTHERIA STATISTICS

Longest quarantine for diphtheria	103 days
Shortest quarantine for diphtheria	6 "
Cases antitoxin used in diphtheria	38
Cases antitoxin not used in diphtheria	8
Total diphtheria cases reported	46
Deaths from diphtheria	3

Antitoxin was used in one fatal case, given on the fifth day of disease and the patient died the next day, aged 4 years.

Antitoxin was not used in two fatal cases: One patient died on the eleventh day, aged 3 years, and one died about the fifth day, aged 4 years.

HEALTH OFFICERS IN CITIES OF THE SECOND CLASS

Dr. Calvin E. Nichols, health officer of the city of Troy, N. Y., read a paper on local health conditions before the Rensselaer County Medical Association, on Monday evening, January 20, 1902. The statement of Dr. Nichols, in regard to changes in health regulations instituted by the creation of the White Charter, is a matter of interest:

"The most notable changes in this department of the city government is the abolishment of the Board of Health and the creation of the Health Department, with a single head, the Commissioner of Public Safety. The duties and responsibilities, as well as the authority of the Health Officer, have been materially increased. He is allowed a deputy and the direction of the district physicians is a part of his duty. The sections of vital statistics, plumbing, inspection and sanitary inspection, are also under his direction. In fact he must assume the charge and responsibility of all that pertains to the duties of the Department. He is the executive officer of the Department, and in a measure, is responsible for the methods adopted and put in force to secure the compliance with its rules and regulations, which are in fact vested with authority equal to the State law, which provides for their creation, in every detail."

A CONTRIBUTION TO THE STATISTICS OF CANCER.

R. LASPEYRES. *Centralblatt für allgemeine Gesundheitspflege,* 20th year, 9th and 10th part, 1901.

This is an elaborate study of the statistics of cancer in Prussia, with special reference to the incidence of the disease in the sexes, its relative frequency in rural and urban districts, the time of life at which the greater number of cases appear, and the influence of occupation upon its development.

Laspeyres reaches the following conclusions:

1. Estimates of the total number of living and fatal cases of cancer cannot be accepted as identical and comparable, since care is not taken to consider the influence exerted by the very different local conditions of the living patients at different ages. Comparative estimates can only be obtained when an average is found based upon the relative number of deaths from cancer in the different decades of life from thirty to eighty years—the few deaths in the other periods of life may be disregarded.
2. From estimates made under these conditions it is shown that the mortality from cancer in city and in country is not higher for women than for men, but, in fact, is somewhat lower.
3. Only in the period from thirty to fifty years is the mortality from cancer higher among women than among men, and in the other periods it is lower.
4. This difference is found equally in city and country, in the large, medium and smaller communities.
5. In all periods of life the mortality from cancer increases with the size of the dwelling place.
6. With increased density of population the relative number of deaths from cancer also increases.
7. The different forms of occupation have no influence upon the spread of cancer.

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held February 12, 1902, in Alumni Hall. The meeting was called to order at 8:45 p. m., the president, Dr. William H. Murray, in the chair. The following members were present: Drs. Ball, Blumer, Carroll, Cook, Craig, Davis, Elting, W. H. George, L. Hale, Hinman, Jenkins, Lipes, Lomax, Macdonald, Mereness, C. H.

Moore, Mosher, Moston, Murray, Myers, Neuman, Papen, Richardson, Shaw, Steenberg, Streeter, Theisen, Traver, Troidle, E. A. Vander Veer, Van Rensselaer, Ward, Wiltse and a number of guests.

1. *Reading of the minutes of last meeting.*

Dr. Davis moved that the minutes as printed in the Albany Medical Annals be adopted. The motion was seconded and carried.

2. *Minutes of special meetings.* There were none.

3. *Applications for membership.* No names were presented.

4. *Reports and resolutions.* None were offered.

Dr. August Jerome Lartigau, of New York, read a paper on "Recent Advances in Ætiology of Rheumatic Fever."

The President then declared Dr. Lartigau's paper open for discussion.

Dr. Ward said that the subject under consideration had come up since he was a student. The paper was most interesting and showed careful investigation. He would not attempt to discuss the paper from a bacteriologist's point of view, but from the standpoint of a clinician he felt convinced that acute articular rheumatism was caused by bacteria. Attention was called to the frequency of this disease at certain seasons of the year and to its affecting persons of all ages and conditions of life. On account of the severe constitutional disturbance, the fever with the local pain and swelling which so rarely results in suppuration he believed that we did not have to deal with the ordinary suppurative bacteria. He felt the Society was deeply indebted to Dr. Lartigau for this paper.

Dr. Mosher expressed his indebtedness to Dr. Lartigau for his able paper. He said that more clinical study is required before we can reach definite conclusions as to the cause of this disease. In the third edition of Osler's *Text-Book of Medicine,* acute articular rheumatism had been classified among the acute infectious diseases, and this arrangement caused some comment at the time, but has been generally accepted. Dr. Mosher thought rheumatism might be classified with the acute exanthemata. He regretted that the pus organisms could not be accepted as important in the etiology. There are many points of similarity between scarlet fever and acute articular rheumatism. The tonsils form the point of infection in both diseases. They are both febrile, eruptive and have joint and other complications in common. His observation has not been so much of rheumatism as of Sydenham's chorea and he believed that chorea could be explained as an acute infectious disease. It has many affiliations with rheumatism. It most frequently follows rheumatism, and next to rheumatism it is found most frequently after scarlet fever and then after influenza. He had observed a case of chorea associated with suppurating glands in the neck. The conclusion reached by Dr. Lartigau that in acute articular rheumatism we have to deal with an infectious organism is logical.

Dr. Blumer thought the subject had been gone over so thoroughly and carefully that little more could be said. He wished to state, however, that from personal observations and a pretty extensive review of the literature he had come to the same conclusion as Dr. Lartigau, namely, that the specific organism is still to be found. He had studied cases of chronic endocarditis and pericarditis, the result of articular rheumatism, and had found the exudate sterile. He was under the impression that pus cocci, particularly streptococci, caused the acute forms.

Dr. **Lartigau** in closing the discussion said that he had been much impressed with the different ideas of investigators as to what constitutes acute articular rheumatism. They were not particular in choosing typical cases. Judging from the number of fatal cases he thought some cases of pyæmia may have been included. An instance of this recently came under his attention at Roosevelt Hospital. A case was admitted which was diagnosed by the attending physicians as a classical picture of acute articular rheumatism. The autopsy two hours after death revealed the true nature of affairs and staplyococci were found in the blood and other organs. Similar cases may explain the diversity of results.

Dr. **M. L. Rhein**, of New York, read a paper on the "Bearing of Oral Pathology on General Medicine."

The **President** then announced Dr. Rhein's paper open for discussion.

Dr. **Shaw** spoke of the effect that improper feeding during infancy had upon the milk teeth. More care should be taken of the first set and at the first sign of decay children should be sent to the dentist. A cavity in a tooth is really an ulcer and forms an excellent incubator for germs. If the resistive power of the child is lowered for any reason, not only local but general disease may ensue. Dr. Shaw moved that the privileges of the floor be extended to the guests present. The motion was seconded and carried.

Dr. **Lartigau** mentioned the fact that tonsillar and adenoid infections may be due to gum and teeth troubles. Osteomyelitis of the jaw is often secondary to affections of the teeth. He thought the subject was well worthy of consideration from a clinical point of view.

Dr. **Rhein** in concluding said he wished to emphasize the importance of prophylaxis. The length of the program prevented his entering into this subject as fully as he desired. The medical profession has ignored the value of dentistry in diagnosis and prognosis. He has been able to diagnose diabetes and other grave constitutional diseases from the condition of the teeth before urinary and other changes occurred. The subject of dental pathology has been neglected in our Eastern medical colleges. This is taught in some of the Western colleges and enables doctors to recognize normal and abnormal conditions of the mouth.

Dr. **George T. Moston** read a paper on "Suggestion as a Therapeutic Agent."

At the close of Dr. Moston's paper Dr. **Mereness** moved that a note of thanks be accorded Drs. Lartigau and Rhein for their interesting and valuaable papers. Dr. **Ward** seconded the motion, which was carried unanimously.

Dr. **Moston** demonstrated the case of a man with complete analgesia. Since birth he has been insensible to pain, heat or cold. He had no sense of taste or smell.

There appearing no further business the Society adjourned.

Henry L. K. Shaw, *Secretary*.

William H. Murray, *President*.

SARATOGA SPRINGS MEDICAL SOCIETY

A regular meeting of the Saratoga Springs Medical Society was held January 24, 1902, at the Business Men's Association. The meeting was called to order at 9:15 P. M., by the President, Dr. George F. Comstock.

Minutes of last meeting read and approved.

Dr. GEORGE T. CHURCH read a paper on "Complications of Gonorrhœa,—Acute and Chronic."

Dr. TOWNE reported a case of "Septic Endocarditis of Gonorrhœal Origin, with Autopsy.

Dr. MORIARTA read a paper, "Personal Experience in the Surgical Treatment of Stricture of Male Urethra."

The discussion was opened by Dr. VARNEY. He had listened with much interest and profit to the various papers. He spoke of the persistence and annoyance gonorrhœal arthritis was to most physicians and the value of the ice-bag locally he had found in his cases. Endocarditis, as far as he knew, fortunately occurred but seldom, and personally he had seen but a very few cases.

Dr. FISH mentioned the benefit he had seen in several cases of gonorrhœal arthritis, of protoiodide of mercury combined with the use of urotropin. He brought up the question of examining prostitutes, from an ethical standpoint, as to whether it was wise or just for a regular physician to give a signed certificate after a superficial examination, and that but once a week. He was ashamed to confess that a physician in good standing was doing that same thing, and personally he wishes to condemn the practice.

Dr. SWAN thought the practice was not only useless, but almost criminal and degrading to the profession.

Dr. CHURCH, in closing, remarked there were times when a man must be a pessimist in treating gonorrhœal arthritis. He was sure he had seen marked results follow the use of urotropin. He mentioned the case of a young man whom he was treating for an obstinate neuralgia in the arm, which was cured only after a discharge from his urethra was cleared up.

Dr. MORIARTA (closing), agreed that gonorrhœal arthritis was most obstinate in treating. Bandaging the joint and ice-bags locally were of value in the effusion. He thought the value of urotropin depended upon its action in diminishing the number of gonococci so that the absorption of toxines was correspondingly lessened. The subject of ophthalmia was one that should interest us all, and this was a condition which required prompt and energetic treatment. He spoke of the necessity of cleanliness in these cases, and personally seeing that the little details of treatment were properly carried out. Nitrate of silver was one of the most valuable drugs we have in combating it, and atropine a valuable adjunct. The question of ethics was hard to determine, and he would not discuss it, as each should settle the matter for himself. It was unfortunate for the profession that a few members would degrade us all, and he thought that the procedure as carried on was nothing more or less than a blackmail against the prostitutes.

Dr. **Small** then reported a case of repeated severe intestinal hemorrhage, complicating typhoid fever, in which infusions of saline with gelatin were of great value, recovery following.

Dr. **Humphrey** said he had seen the case with Dr. Small several times during hemorrhage, and they were certainly severe. A remarkable thing to him was the fact that the pulse remained pretty fairly strong and of good force, even during the most profuse bleeding.

Dr. **Moriarta** said he had used the solution of gelatine and saline in two cases of typhoid this fall, both severe cases, with recovery. He had also used it in a case of hemoptysis, in which there was hemophilia, with good results. In the later case chloride of calcium internally had had no effect.

The Committee on Membership reported favorably in the names of Dr. G. Scott Towne, of Saratoga, and Dr. J. J. Dever, of South Glens Falls. They were both unanimously elected to membership.

Dr. **Humphrey** presented the name of Dr. E. A. Palmer for membership. Referred to the Committee on Membership.

Adjourned in due form.

Present: Drs. George F. Comstock, M. E. Van Arnam, W. E. Swan, H. Bentley, G. T. Church, M. E. Varney, D. C. Moriarta, G. H. Fish, C. B. Small, J. Humphrey, J. B. Ledlie, A. W. Thompson, W. H. Sanford.

F. J. **Resseguie**, *Secretary*.

George F. Comstock, ***President***.

A regular meeting was held in the Business Men's Association, February 7, 1902, the President, Dr. George F. Comstock, in the chair. The meeting was called to order at 9:15 p. m.

Minutes of last meeting were read and approved.

The first paper on "Etiology and Pathology of Puerperal Eclampsia," was by Dr. J. R. **Swanick**. The "Symptoms" were considered by Dr. **Downs**; "Diagnosis and Prognosis" by Dr. **Fish**, while Dr. **Humphrey** presented the "Treatment."

The discussion was formally opened by Dr. **Comstock**. He thought the poison that produced the convulsions was some toxine that had not as yet been discovered. The use of cathartics or purges was important, and we should keep in mind the importance of diluting the poison present.

Dr. **Swan** thought the question of producing artificial delivery was to be considered, and if possible, we should strive to tide patient over until the eighth month of pregnancy before this was attempted or until the child was viable, as in this way we could perhaps save both mother and child. It seemed desirable to dilute the poison in the blood by introducing as much salt solution into the circulation as blood is withdrawn by venesection.

Dr. **Moriarta** said we had unfortunately no specific or anything approaching it in the treatment of this terrible condition. He said literature gave us but little light on the causation, as it was contradictory. If we wished to reduce high arterial tension veratrum would do it, but he was not sure that that was all we wished to do. Personally he was at a loss to know just how to treat his next case, but warned against the use of too much morphia, and to rely more on chloral. It is necessary to regulate diet, and to keep the condition of the urine in hand if we see cases early. He was in favor of emptying the uterus early.

Dr. LEDLIE said when we were face to face with a case it was puzzling to know what to do. He had used chloroform with satisfaction, and asked Dr. Humphrey how much veratrum viride he had used in a given case.

Dr. HUMPHREY replied he was not positive how much he had used, but cases in which eighty-five minims in ten hours had been used had been reported.

Dr. SWANICK, in closing, thought as soon as patient was quieted, to deliver as soon as possible was a good procedure, although statistics had been compiled showing the mortality was the same whether interfered with or not.

The committee on membership reported favorably on the name of Dr. E. A. Palmer and he was unanimously elected to membership.

The meeting adjourned in due form.

Present: Drs. G. F. Comstock, M. E. Varney, M. E. Van Arnem, J. H. Humphrey, C. B. Small, A. W. Thompson, D. C. Moriarta, G. H. Fish, A. S. Downs, J. R. Swanick, A. Hewitt and F. J. Resseguie.

F. J. RESSEGUIE, *Secretary.*

GEORGE F. COMSTOCK, *President.*

Medical News

Edited by H. Judson Lipes, M. D.

ASSOCIATION OF THE ALUMNI, ALBANY MEDICAL COLLEGE.—A meeting of the Executive Committe was held on February 24, 1902, with Dr. Vander Veer in the chair. Routine business was transacted, and committees were appointed to arrange for the entertainment on Commencement day of the Alumni and to prepare the Annual Banquet. Tuesday, May 6th, was announced as the date for Commencement. By resolution of the committee, the essay of Dr. Lipes, to whom was awarded the Schuyler prize for 1901, was ordered published in the ALBANY MEDICAL ANNALS.

ALBANY MEDICAL COLLEGE ALUMNI ASSOCIATION OF THE CITY OF NEW YORK.—The seventh annual banquet of this Association was held at The Arena, New York City, on the evening of January 23, 1902. In point of attendance and general enthusiasm, this meeting was the most successful thus far held, forty plates having been arranged for the following members of the Association and their invited guests: Drs. Hamlin B. Maben, ('47); William Frederic Holcombe, ('49); Theodore Y. Kinne, ('62); Thomas D. Crothers, ('65); Russell G. Andrews, ('66); Edward F. Quinlan, ('68); William Geoghan, ('73); William Stevens, ('75); Maurice J. Lewi, ('77); Edward W. Carhart, John H. Cotter, ('78); Allen Fitch, C. de W. Van Dyck, ('79); Meyer L. Rhein, ('80); Warren C. Spalding, ('81); Horace

R. Powell, George J. Holmes, Walter W. Scofield, ('82) ; John A. Cutter, (86) ; Thomas H. Willard, ('87) ; Robert F. Macfarlane, ('88) ; Frederick W. Loughran, Thomas H. Flynn, ('90) ; Arthur J. Capron, Fred B. Stellwagen, Walter C. Gilday, ('94) ; Durand R. Kinloch, Frederick W. Cordes, Harry D. Goetchius, Charles Gartner, ('95) ; A. Parker Muir, ('96) ; Fred B. Weaver, Robert W. Andrews, ('98) ; Bernard Livingston, Karl A. Parshall, Leon G. Ogden, ('99). Interesting and entertaining addresses were made by the President, Dr. Fitch, and by Drs. Lewi, Geoghan, Rhein, Holcombe, Kinne and Ogden. An interesting feature was the souvenir menu, upon which was given a very clear and distinct illustration of the old Albany Hospital, at the corner of Howard and Eagle streets, in which clinical instruction was given from 1849 to 1901. The following named officers were elected for the ensuing year: President, Dr. William Geoghan, ('74) ; vice-president, Dr. Meyer L. Rhein, ('80) ; secretary, Dr. Charles Gartner, ('95) ; assistant secretary, Dr. Amasa Parker Muir, ('96) ; treasurer, Dr. Robert F. Macfarlane, ('88) ; governors, one year, Drs. C. de W. Van Dyck, ('79), George H. Baker, ('86) ; governors, two years, Drs. Warren C. Spalding, ('81), Walter C. Gilday, ('94).

The Board of Governors of the Albany Hospital.—At the annual election for governors of the Albany Hospital, held January 24, 1901, Walter Launt Palmer was chosen to succeed the late John G. Myers. The other nineteen members of the board were all re-elected, as follows: Benjamin Walworth Arnold, Lewis Deitz, Henry Hun, M. D., Albert Hessberg, Charles R. Knowles, J. Townsend Lansing, Ariel Lathrop, William L. Learned, Gustavus Michaelis, Archibald J. McClure, James McCredie, Dudley Olcott, Jesse W. Potts, Robert C. Pruyn, Robert G. Scherer, Albert Vander Veer, M. D., William J. Walker, Samuel B. Ward, M. D., William M. Weaver.

The annual election of the board of governors of the Albany Hospital was held Sunday afternoon, February 9th, at the hospital, and was attended by thirteen of the twenty governors. These officers were chosen: President, James McCredie; vice-president, William H. Weaver; secretary, Gustavus Michaelis; treasurer, Charles R. Knowles; treasurer endowment fund, Dudley Olcott; executive committee, the president, vice-president, *ex-officio,* and Dudley Olcott, Albert Vander Veer, M. D., and Charles R. Knowles.

The new pavilion, which was built by the board of supervisors, and which has been known as the "detention pavilion," will in the future be known as "Pavilion F." Drs. Henry Hun and Samuel B. Ward were appointed a committee to inspect the new building to learn whether it has been erected and furnished in accordance with the contracts. The committee is empowered and authorized to accept the building and to place it in charge of the Albany Hospital. In this pavilion persons afflicted with nervous diseases will have the best treatment that Albany doctors can give. The new pavilion will be as cheerful as any of the other pavilions of the new hospital, and is in keeping with the rest of the institution.

Governors William L. Learned, Albert Hessberg and Dr. Samuel B. Ward were appointed a committee to frame the annual appeal. Governor Walter Launt Palmer was present at the meeting, the first since his selection, and he inspected the entire institution. In the future the executive committee will meet on Wednesday instead of Thursday. The meetings are held at noon in the Mechanics' and Farmers' bank.

The Albany Guild for the Care of the Sick Poor; Statistics for January, 1902.—Number of new cases, 74. *Classification of cases:* Dispensary cases receiving home treatment, 3; district cases reported by the health physicians, 32; charity cases reported by other physicians, 19; total number of charity cases, 54; moderate income patients, 20. *Classification of diseases:* Medical, 33; surgical, 10; gynecological, 31. This general classification includes 9 maternity cases in the general work of the Guild and 4 in the Special Obstetrical department. Number of contagious diseases in medical list, 7; removed to hospital, 3; died, 5. *Visits of the Guild nurses:* Number of visits with nursing treatment, 644; for professional supervision of convalescents, 280; total for the month, 924.

Special Obstetrical Department: Number of cases, 4; obstetricians, 2; medical students in attendance, 5; number of visits of obstetrician in charge, 20; by assistant obstetrician, 14; by students, 13; by Guild nurses, 50; total, 96 visits. Cases were reported to the Guild by the city physician, by 3 three of the health physicians and by 19 other physicians.

Typhoid Fever and Filtered Water.—The Superintendent of the Water Bureau of the Department of Public Works of the City of Albany has issued the following statement:

As a result of the information obtained from physicians concerning typhoid fever in this city, and the effect of the filters, we are able to give the following records of typhoid deaths:

	1st year filtered.	2nd year filtered.	Average before filtration.
On unfiltered supply	1	2	
On mixed supply	5	8	
On filtered supply	8	7	
Alien cases	13	8	
Doubtful cases	4	2	
Total for one year	35	27	84
Per cent. reduction	58.34	67.86	

The water service is divided into three sections, approximately as follows: all west of Swan street receives filtered water; all between Swan and Pearl, and also the part between Pearl and Broadway from Clinton to Madison avenue, receives four-fifths filtered and one-fifth unfiltered stream water from Rensselaer lake; all the balance of the city from Pearl street to the river, including all of North Albany, receives unfiltered stream water.

THE WILL OF THE LATE MRS. JERUSHA APPLETON.—Among the bequests of interest to the medical public in the will of the late Mrs. Appleton are the following: Albany Guardian Society, $1,000; Albany City Tract and Missionary Society, $1,000; Child's Hospital, $1,000.

FOR PROFESSIONAL UNITY.—At the recent meeting of the Medical Society of the State of New York, the retiring President, Henry L. Elsner, was made chairman of a committee of five to confer with a committee of equal number representing the New York State Medical Association for the purpose of formulating a plan by which the regular profession of the State of New York might be united.

Dr. Elsner has selected as his associates on this committee Dr. Abraham Jacobi, of New York; Dr. Albert Vander Veer, Albany; Dr. A. M. Phelps, of New York, and Dr. George Ryerson Fowler, of Brooklyn.

STATE AND COUNTY CIVIL SERVICE EXAMINATIONS FOR POSITIONS OPEN TO PHYSICIANS.—They will be held March 15, 1902, open competitive examinations for positions in New York State and County departments and institutions. The following are open to physicians: Associate in Chemistry, ($1,800); Associate in Clinical Psychiatry, ($1,200); Chief Associate in Neuro-Pathology, ($1,800), Pathological Institute; open to non-residents subject to the provisions of regulation X. Applications for these positions must be filed in the office of the Commission on or before noon of March 10th. For further particulars and application blanks, address the Chief Examiner, State Civil Service Commission, Albany, N. Y.

THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.—The fifty-eighth annual meeting of the American Medico-Psychological Association will be held in Montreal, the third Tuesday, Wednesday, Thursday and Friday in June (17th, 18th, 19th and 20th), 1902. The meeting follows that of the American Medical Association at Saratoga, which occurs in the second week of June. The matter of transportation has been placed in the hands of the committee of the latter association, and it is hoped to obtain special railroad rates for both meetings. The headquarters of the Association will be the commodious and comfortable Windsor Hotel, delightful in all its appointments and especially well adapted for convention purposes. Special rates have been secured for members and their friends. The committee, under the chairmanship of Dr. Burgess, has taken up the matter of arrangements for the meeting with much enthusiasm and, with the large attendance expected, a profitable meeting from every point of view is secured. The annual address will be delivered by Dr. Wyatt Johnston, Lecturer on Medical Jurisprudence, McGill University Law Faculty; Assistant Professor of Hygiene of the Medical Faculty; Pathologist to the Montreal Hospital. Subject: "The Medico-Legal Appreciation of Trauma in Its Relation to Abnormal Mental Conditions." A large number of other valuable papers are promised.

SUMMARY OF MORTALITY OF THE STATE OF NEW YORK FOR THE YEAR OF 1901.—In the December *Bulletin* of the New York State Department of Health a general summary and the principal causes of death for the year were given.

In addition to the 129,257 deaths for the year reported in the *Monthly Bulletin,* there were 1,500 delayed returns, making the death rate 18.0 per thousand population. The mortality was 7,500 in excess of the average of the past five years, but the rate was the same as that of 1900. The sanitary districts all participate in the variations in mortality.

The infant mortality is unusually low, being 3,500 less than in 1900 and 2,500 less than the average of the past five years. This low rate prevailed throughout the State; it was unusually low in July, being less than in August and September. The deaths at seventy years and over were but one-third as many as those under five years in the maritime districts; in the rest of the State they exceeded them by 4,300, and constituted 27.0 per cent. of the total.

The zymotic mortality was 14.5 per cent. of the total, which is above the average. Diarrhœal diseases were excessive in the maritime district, but below the average in the rest of the State. Scarlet fever caused double the average number of deaths. On the other hand, diphtheria caused 500 fewer deaths than the average and was decreased throughout the State. Measles decreased everywhere from the high rate of last year. Typhoid fever was less prevalent, the decrease being most marked in the Hudson and Mohawk Valley districts.

Smallpox, following several months of absence, was widely disseminated in November ,1900, by a travelling troupe, and occurred from then to the end of 1901 in 110 localities; 1,100 cases existed in that time, besides 1,982 in the City of New York. There was but one case in fifty of these localities and one-half the entire number occurred in six localities. There were 445 deaths, 426 of which were in the maritime district; this far exceeds any former year. At the end of the year smallpox exists in sixteen localities, in all of which except Buffalo, lumber camps in the vicinity of Tupper lake, Binghamton and Watertown, there is but one case.

The grippe epidemic has this year caused 7,000 deaths, against 11,500 in 1900, the average of eleven previous epidemics being 5,500. There were 7,600 fewer deaths than last year from acute respiratory diseases. About seventy per cent. of the deaths reported from acute respiratory diseases were from pneumonia.

THE NATHAN LEWIS HATFIELD PRIZE FOR ORIGINAL RESEARCH IN MEDICINE.—The College of Physicians of Philadelphia announces through its committee that the sum of five hundred dollars will be awarded to the author of the best essay in competition for the above prize. Subject: "The Relation between Chronic Suppurative Processes and Forms of Anæmia." Essays must be submitted on or before March 1, 1903. Each essay must be typewritten, designated by a motto or device, and accompanied by a sealed envelope bearing the same motto or device and containing the name and address of the author. No envelope will be opened except that which accompanies the successful essay. The committee will return the unsuccessful essays if reclaimed by their respective writers or their agents within one year. The committee reserve the right not to make an award if no essay submitted is considered worthy of the prize. The treatment of the subject must, in accordance with the conditions of the Trust, embody original observations or researches or original deductions. The competition shall be open to members of the medical profession and men of science in the United States. The original of the successful essay shall become the property of the College of Physicians. The trustees shall have full control of the publication of the memorial essay. It shall be published in the Transactions of the College, and also when expedient as a separate issue. Address J. C. Wilson, M. D., chairman, College of Physicians, 219 South Thirteenth street, Philadelphia, Pa.

THE MALTINE COMPANY'S PRIZE ESSAY CONTEST.—The Maltine Company, of Brooklyn, N. Y., has offered a first prize of $1,000 and a second prize of $500 on the subject of "Preventive Medicine." The following are the conditions of the competition: First—Essays offered in competition must treat the subject of Preventive Medicine in its various relations to the welfare of the human race, either treating the topic in its broadest scope as affected by disease, custom, environment, heredity, etc., or from the view-point of the specialist who contends that the most potent factors inimical to mankind result from special conditions which he is enlisted to combat. Second—In order that there may be no violation of medical ethics and no suspicion of mere commercialism on our part, Maltine or any of its combinations must not be mentioned or even indirectly alluded to in the essays. Third—Competition is open to graduates of all recognized medical colleges. Fourth—The essays will be judged by the following gentlemen: Daniel Lewis, A. M., M. D., New York, President New York State Board of Health; Professor of Special Surgery (Cancerous Diseases), Post-Graduate Medical School; Surgeon to the Skin and Cancer Hospital; Editor *Medical Review of Reviews;* Charles A. L. Reed, A. M., M. D., Cincinnati, Ex-President American Medical Association; Ex-President American Association of Obstetricians and Gynæcologists; Fellow British Gynæcological Society; John Edwin Rhodes, A. M., M. D., Chicago, Associate Professor Diseases of the Chest, Throat and Nose, Rush Medical College; Former Professor of Physical Diagnosis and Clinical Medicine, Northwestern University Woman's Medical College; and the prizes awarded in accordance with their decision. Fifth—The essays are to consist of at least ten thousand words. Sixth—Each competitor is to send us three typewritten copies of his essay by mail in a sealed envelope. These copies are not to be signed by the author, or contain anything which might point to his identity, but are to be signed with a *nom-de-plume*. Seventh—Another sealed envelope shall be sent to us containing this *nom-de-plume* together with the author's name and address. This envelope must be endorsed "For Identification," and will remain sealed until the judges have decided upon the two prize-winning essays, and will then be opened in order that the names of the successful competitors may be ascertained. Eighth—The prize essays and any others which are deemed suitable will be published in a medical journal or journals subject to the approval of the authors. Ninth—We reserve the right to republish any of these essays in pamphlet form, restricting the circulation to the medical profession. Tenth—Essays entered in competition must be in our hands by September 1, 1902.

THE NEW LYING-IN HOSPITAL OF NEW YORK CITY.—The beautiful building of the Lying-in Society of New York City was formally opened and the first patient admitted the last week in January. There are eight floors and one hundred and forty thousand square feet of floor space. The dimensions of the structure are 184 feet on Second avenue, 166 feet on Eighteenth street and 83 feet on Seventeenth street. Light comes from all four sides and through 1,559 windows. In the electrical system there is a device by which the light of the incandescent lamps can be made bright or dim at will. In the cellar are the engines, boiler, pump and dynamo rooms and the machinery used for ventilating and refrigerating. The basement contains the out-patient department, autopsy room, chapel and fifteen bedrooms. On the first floor are the physicians' rooms, library and executive offices, while the second floor is given up largely to the nurses. The septic department, on the third floor, consists of twelve bedrooms, serving, operating and dining rooms. The fourth, fifth and sixth floors are identical, each containing sixty-two beds for patients. At the foot of each bed is suspended a cradle. In addition to the wards, there are also private rooms for patients. A summer roof garden and a winter sun garden, inclosed in glass, are on the seventh floor, overlooking Stuyvesant Park. The new hospital is the gift of J. Pierpont Morgan, who at first gave $1,000,000 for the purpose. The price of building materials then arose and a larger sum became necessary. Thereupon Mr. Morgan increased this gift and the amount he has given to the hospital now amounts to $1,250,000. He also completely furnished the institution with linen. There is no doubt that this is the most perfect institution of its kind in the world.

THE JOURNAL OF ADVANCED THERAPEUTICS.—The January number of this new journal succeeds two publications, *The Journal of Electro-Therapeutics* and *The Lancet,* under a new name and règime. The editor, William Benham Snow, M. D., will be assisted by a large number of associate editors having in charge special departments. Advanced therapeutics is a departure from the features of both of the former journals, but when it is recognized that it is possible by this means to enlarge both the scope and size of the publication no doubt the change will be found a satisfactory one. The electro-therapeutists will find as much literature upon the subject as was formerly contained in the older journal, and much upon kindred subjects. The increasing interest in the employment of electricity which has been awakened by the discovery of the properties of the Roentgen ray, and the application of the improved electrical facilities, combined with the other subjects of more or less universal application, we believe will be acceptable.

PERSONAL.—Dr. HOWARD A. LAMOURE (A. M. C. '00), has been appointed Assistant Physician to the Craig Colony at Sonyea, N. Y.

—Dr. FLAVIUS PACKER (A. M. C. '93), who has been First Assistant Physician at the Matteawan State Hospital for the Criminal Insane, and has had a long service in other State hospitals at Willard, Ogdensburg and Brooklyn, has been placed in charge of the pavilion for the insane at Bellevue Hospital, New York City, by the new board of hospital trustees.

—Dr. ISRAEL I. BUCKBEE, of Fonda, N. Y., (A. M. C. '41), recently celebrated his eighty-second birthday anniversary at his home by entertaining a few of his friends and relatives. Dr. Buckbee is the oldest living graduate of the Albany Medical College. He was born February 12, 1821, in Dutchess county, and is the representative of the fourth generation to bear the name, Israel Buckbee, in this country. The doctor's parents went as pioneers to Warren county in 1822. On the home farm in that county, which was almost a wilderness, Dr. Buckbee passed his boyhood. At the age of seventeen he began the study of medicine at Glens Falls. This was followed by a year's course in the Vermont Medical College and two more in the Albany Medical College, from which he graduated in 1841. He spent one year with Dr. Snow, in the town of Root, and then located in Fonda, where he has since practiced his profession, on September 10 last having completed his sixty-first year of practice.

—Dr. D. D. PARISH (A. M. C. '01), has located at New Baltimore, N. Y.

—Dr. WALTER H. SANFORD (A. M. C. '01), has been appointed Medical Interne at the Matteawan State Hospital, Fishkill-on-the-Hudson, N. Y.

—Dr. JESSE M. W. SCOTT (A. M. C. '96), has been promoted to be First Assistant Physician at the Matteawan State Hospital, Fishkill-on-the-Hudson, N. Y., to fill the vacancy created by the transfer of Dr. Packer to Bellevue Hospital.

Book Reviews

The Diagnostics of Internal Medicine. A Clinical Treatise upon the Recognised Principles of Medical Diagnosis. Prepared for the Use of Students and Practitioners of Medicine. By GLENTWORTH REEVE BUTLER, A. M., M. D. With Five Colored Plates and Two Hundred and Forty-six Illustrations in the Text. New York: D. Appleton & Company. 1901.

This book is divided into two parts, one upon symptoms and the other upon diseases. In Part I. under the general title "The Evidences of Disease," are described symptoms and the methods of observing or eliciting them, and in the second part is an arrangement of the groups of symptoms which constitute disease. As the author explains in the preface the two parts are complementary; as, for example, it is stated in Part I. that a persistently rapid pulse is an evidence of exophthalmic goitre, and in Part II. the catalogue of symptoms of this disease is found. Conversely, Kernig's sign may be found in Part II. under meningitis and in Part I. the method of determining this symptom is described.

There are forty-four sections in Part I., covering the full examination of the patient, including the history of the disease and the method of recording it, with the symptoms manifested in diseases of the various organs and anatomical parts. The technique of the examination of the blood, sputum, stomach contents, fæces and urine is given in full. This part requires 654 pages.

Part II. consists of eleven sections, which bring the total number of pages to 1033. These sections include Infectious Diseases, Diseases of the Nervous, Digestive, Respiratory and Circulatory Systems, of the Blood and Ductless Glands, of the Kidney and of the Muscles, Constitutional Diseases, the Intoxications, Sunstroke and Diseases due to Animal Parasites.

Dr. Butler's book is to be highly praised. The work has been carefully and thoroughly done, and no omissions or inaccuracies have been noted. The sense of order and system seems to have been fully developed, and the emphasis upon methodical case observation is a marked feature. In illustration there is particular richness. Models have been photographed and the resulting plates have been used for the delineation of various important areas of the surface. This has been made a most attractive feature. The author's text is also frequently simplified by diagrams, for which he has a noticeable aptitude. This is especially shown in the multi-chrome plates illustrating the function of the nervous system, and in the two full-page charts of the motor and sensory pathways an ingenious sub-division has been effected by the separation of the *direct* from the *indirect* paths, thus greatly simplifying a complicated subject. The volume should have a place in every medical library.

Seventeenth Annual Report of St. Margaret's House, Albany, N. Y. For the year ending September 30, 1901. Albany: The Argus Company. 1901.

This is the first report of St. Margaret's House issued separately and will direct attention to this foundling institution annexed to the Child's Hospital, and its excellent work.

The population averages about sixty, and 201 infants were treated during the year; the mortality rate, which includes a summer epidemic of ileocolitis, having been 12.9 per cent. The report contains an historical sketch on the "Origin and Development of St. Margaret's House," by Mrs. Evans; the "Medical Report," by Dr. Shaw, in which is given a brief description of the methods employed in preparing and preserving the infants' food, the reports of the ophthalmic and aural surgeons and of the pathologist, a sketch of the Training School for Nursery Maids, and the usual tables and acknowledgments. An interesting feature is the illustrations, which show in excellent half-tones the various departments of the House, and most flourishing groups of babies and nursery maids. There is much suggestiveness in the various parts of this little pamphlet, particularly in the methods of training of nursery maids and the preparation of food. It is, perhaps, needless to say that milk in its various modifications is the diet upon which reliance is placed. There is every evidence of care and method in the administration of this charity, which is one to which Albany may point with pardonable pride. In fact, publicity has already been given to its excellence by the commendation of visiting pediatrists who have had opportunities of inspecting its work.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, Other than Drug-Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College; Physician to the Philadelphia Hospital, etc. *Volumes III. and IV.—Climatology, Health Resorts, Mineral Springs.* By F. PARKES WEBER, M. A., M. D., F. R. C. P. (London), Physician to the German Hospital, Dalston; Assistant Physician North London Hospital for Consumption, etc. With the Collaboration for America of GUY HINSDALE, A. M., M. D., Secretary of the American Climatological Association, etc. In Two Books. Book I.—Principles of Climatotherapy—Ocean Voyages—Mediterranean, European and British Health Resorts. Book II.—Mineral Springs, Therapeutics, etc. Illustrated with Maps. Price for the complete set, $22.00 net. Philadelphia: P. Blakiston's Sons & Co. 1901.

These are the Third and Fourth Volumes of Cohen's System of Physiologic Therapeutics, whose timeliness has already been commented upon. The first part treats of the factors of climate, with their effect on physiologic functions and pathological conditions, and describes the fundamental principles that underlie the application of climates, health resorts and mineral springs in the prevention of disease, and to promote the comfort and recovery of the sick.

The second part describes health resorts; and the third part discusses in detail the special climatic treatment of various diseases and different classes of patients. Book II. also describes the health resorts in Africa, Asia, Australasia and America.

In Book I. ocean voyages are first treated of with considerable detail and their advantages and disadvantages, indications and counter-indications as a therapeutic measure, are pointed out. As very little exact information on this important subject exists in an available form, this chapter should be of great use to physicians. The subject of altitude is treated in a full and definite manner, and the classes of patients and disorders suited to different climates. The difference between summer and winter climates in Switzerland, and the therapeutic indications for the different seasons are discussed at length. In addition, the sea-coast and inland health resorts of the Mediterranean countries, those of Continental Europe and those of the British Islands, including mountain stations of various elevations, plains, and mineral water spas, are described with fullness of detail. Geographic and climatic features are pointed out, and other characteristics important in selecting a resort that shall be suitable to the tastes and means of the individual patient, as well as beneficial in his disease. Throughout this section allusion is made to the special medical uses of the various resorts described, and to the particular form of treatment for which any one is famous.

The existence of sanitoriums for special diseases, as those at seaside resorts for scrofulous and weakly children, and in various regions for consumption, nervous affections, diseases of women, and the like, are specified; and the mere list of such places, as found in the index, which is very exhaustive, are valuable for reference.

These two volumes include a mass of information which is usually not easily found, and give an appearance of thoroughness creditable to the authors.

Current Medical Literature

SURGERY

Edited by A. Vander Veer, M. D.

A Contribution to the Genesis of Mastitis Adolescentium. (Beitrag zur Genese der Mastitis Adolescentium.)

E. Franck. *Deutsche medicinische Wochenschrift, March 14, 1901.*

The author states that during the past eight years he has twice had an opportunity to observe the condition described by Albers under the term "mastitis adolescentium." In the first case the condition was present in a boy of fifteen, and in the second in a boy sixteen years old. Both patients complained of hardening, and pain on pressure of one mammary gland. In both the left gland was involved, although the right was also slightly sensitive. The affection of the mammary glands in the author's cases was caused by an irritation of the genital organs. This in both cases was produced by masturbation. On inspection of the genitals in the first case, an abnormally developed prepuce was noticed, and the fact that the patient had masturbated for a long time several times a day was discovered. A soothing ointment was applied to the mammary gland, and the boy was told that if he kept on masturbating the entire side of the chest would be destroyed. This was very effective, and in eight or ten days after the boy had stopped masturbating the inflammation of the gland entirely subsided. The author thinks that in this case there was a direct connection between the two conditions.

In the second case a history of excessive masturbation was also obtained. The author believes that "mastitis adolescentium" is a fairly common result of excessive masturbation.

A Contribution to the Post-Typhoid Cases of Suppurative Ostitis. (*Beitrag zu den Posttyphösen Knocheneiterungen.*)

E. Unger. *Deutsche medicinische Wochenschrift, No. 31, 1901.*

Report of the case of a young man, aged twenty, who about two months after recovering from an attack of typhoid fever, developed a small swelling, painful on pressure, on the ulnar side of the right forearm, a little below the elbow. On examination, a swelling of the soft parts, about the size of a walnut, situated on the posterior surface of the ulna. was found. This extended to the bone from which it could not be separated. A smaller, and not so painful, swelling was found directly under the head of the radius. An incision was made through the swelling on the ulnar surface, and a little thin pus evacuated. The walls of the abscess cavity were filled with granulations that bled easily. A sequestrum of bone could be easily removed and the sound passed directly into the marrow cavity. Colonies of typhoid bacilli developed in some of the pus obtained in a sterile manner. The sequestrum of bone was shaken up in a tube with thirty centimeters of bouillon; this became cloudy after forty-eight hours, and typhoid bacilli were also obtained from it. The author quotes the cases of Bruin and Busch, in which typhoid bacilli were found in tibial abscesses, respectively six and seven years after the attacks of typhoid. He also calls attention to the post-typhoidal affections of the vertrebræ, spondylitis typhosa, first noticed by Quincke. In the author's case the location of the swellings was rather unusual. The common seats for the bone affections after typhoid are on the skull, ribs, and, in the majority of the cases, on the tibia.

Concerning Chronic Mastitis in the Adult Male. (*De La Mammite chronique chez l'Homme adult.*)

Niclot and Massoulard. *Archives de Médecine Expérimentale et d'Anatomie Pathologique, Tome II, No. 6.*

These two authors give a careful study of a form of chronic mastitis occurring in adult males, which differs from the mastitis of puberty, and also from the mastitis associated with pulmonary tuberculosis. They go into a careful description of the etiology, pathology, symptoms, diagnosis and treatment. As far as the etiology is concerned, a common predisposing cause is trauma, though this is not absolutely necessary. They were unable to isolate any bacteria in one case which they studied bacteriologically. The pathological picture is one very much resembling the ordinary adeno-fibroma of the breast. They discuss the great resemblance between the chronic mastitis and adeno-fibroma, but conclude that a mastitis cannot be considered as a tumor proper, as it may entirely disappear under appropriate treatment. The symptoms of the disease consist mainly of pain and sensitiveness with an enlargement of the mammary gland, which may be diffuse, but is sometimes nodular. The prognosis is extremely favorable in most cases and the treatment consists, as a rule, of the application of moist heat and compression. Only occasionally is the process so painful that surgical intervention is necessary. The authors conclude: (1) that there exists in man a chronic mastitis of adults distinct both clinically and anatomically from gynecomastia, the mastitis of puberty and other different specific forms of mastitis, and also distinct without doubt from the adeno-fibroma; (2) that traumatism can exist in the anamnesis, but is not necessarily the cause; (3) it consists in an epithelial sclerosis, of which the origin is yet unknown. If a bacterium is the cause, it rapidly loses its virulence and powers of growth. Secondary ascending infections are frequent. (4) The prognosis is benign. (5) Nevertheless, sometimes on account of the insufficiency of external methods of treatment the excision of the painful nodules may be necessary.

The Surgical Establishment of New Channels for the Blood of the Portal Vein. (Chirurgische Oeffnung neuer Seitenbahnen für das Blut der Venæ Portæ.)

S. Talma. *Berliner klinische Wochenschrift, No. 31, 1900.*

The writer refers to an article published by his student, Dr. Lens, in 1892, in which this subject was discussed. He also refers to the work of Drummond and Morison, in which they discuss the results of two cases of cirrhosis of the liver treated surgically, in one of which great improvement was noted. The writer also discusses the experimental work of Tillmann, in which it was demonstrated that by producing in dogs adhesions between the greater omentum and the parietal peritoneum the circulation in the portal vein could be almost entirely cut off without any untoward results. The writer reports one case of perfectly typical cirrhosis of the liver associated with dropsy and delirium, in which, after attachment of the greater omentum to the parietal peritoneum, the patient recovered almost normal health. He further discusses some cases in which there was a spontaneous disappearance of most of the symptoms of the cirrhosis and in which, at autopsy, months or years later, death having occurred from some intercurrent cause, the establishment of a collateral circulation, either through the round ligament of the liver or the œsophageal veins, was clearly demonstrated. The writer assumes that this collateral circulation was responsible for the abatement of the symptoms. The writer furthermore discusses several cases of ascites due to a chronic serous peritonitis, which presented many symptoms of cirrrhosis of the liver, but which were not benefitted by the operation. The writer believes that a chronic peritonitis may gradually involve the liver and cause it to present a pathological picture of cirrhosis. He further advances the view that primary atrophic cirrhosis of the liver is of much more infrequent occurrence than is generally assumed, which results from the fact that a chronic serous peritonitis with a secondary cirrhosis of the liver presents a symptom complex, which suggests primary cirrhosis with ascites. Only the cases of atrophic cirrhosis are amenable to surgical treatment. In certain cases the enlargement of the spleen disappears after the establishment of the collateral circulation. These are the cases, as a rule, in which the enlargement of the spleen has not existed for any great length of time. The writer discusses the danger of hemorrhage from the enlarged œsophageal veins in cases where collateral circulation has been established along these lines, and seems to think that this danger of hemorrhage can be averted by the establishment of new channels for the portal blood, through adhesions of the greater omenteum to the parietal peritoneum.

Subcutaneous Traumatic Abdominal Hemorrhage. (Ueber subkutane traumatische Bauchblutungen.)

EICHEL. *Muenchener medicinische Wochenschrift, Nos. 41 and 42, 1901.*

Subcutaneous injuries of the abdominal cavity have, during the past few years, progressively attracted more and more of the attention of physicians and surgeons. Three main groups of injuries of the abdomen may be distinguished: (1) subcutaneous laceration of the gastro-intestinal tract; (2) injuries of the uropoietic system; (3) cases characterized by hemorrhage into the abdominal cavity.

Different ones of these groups of injuries may be combined in the same case. Most cases of subcutaneous abdominal hemorrhage result from the action of severe force upon the abdomen. It must be also borne in mind that laceration of the liver particularly may result from a simple fall, especially if the organ be already diseased. The convex surface of the right lobe of the liver is most frequently lacerated, and the lacerations are usually of an irregular, jagged character. Small lacerations may heal spontaneously. Lacerations of the spleen most frequently occur in an organ already enlarged, are usually irregular in character, and have been known in some instances to heal spontaneously. Lacerations of the pancreas are of extremely rare occurrence. Isolated, traumatic rupture of the larger vessels of the mesentery is also of rare occurrence. There is no absolutely positive symptom of intra-peritoneal hemorrhage. In general, one is justified in making a probable diagnosis of intra-peritoneal hemorrhage when, following an abdominal trauma, (1) the patient does not recover from the shock incident to the accident; (2) when the general condition rapidly grows worse and is associated with a marked increase in the rapidity of the heart action, as well as an increased rapidity of respiration. The diagnosis is substantiated by the presence of either local or generalized tenderness of the abdomen, associated with vomiting, and the demonstration of dullness in the more dependent portions of the abdomen. The determination of the exact origin of the hemorrhage is usually impossible.

The treatment should be early laparotomy, with careful exploration of the abdominal cavity. The method to be employed in controlling the hemorrhage will depend upon its source. It may be possible to control certain cases of hemorrhage from the liver by means of suture, while in other cases it will be necessary to pack the liver wound. The same procedure may be followed in the treatment of hemorrhage from the spleen, although in some instances it may be advisable to do a splenectomy. The possibility of infection from the wound in the liver must be borne in mind, for there are several cases on record in which wounds of the liver have become infected presumably from the bile passages. The writer reports two cases of rupture of the spleen following trauma, in both of which he practised splenectomy, and one of the patients recovered. He also reports one case of traumatic rupture of the liver which he attempted to suture, but finding it impossible to control the hemorrhage in this manner packed the liver wound and the patient recovered.

PSYCHIATRY

Edited by G. Alder Blumer, M. D.

A Special Nervous Affection of Childhood with Motor Disturbance and Feeble-Mindedness. (Ueber eine besondere im Kindesalter auftretende Affection des Nervensystems mit motorischen Störungen und Schwachsinn.)

W. von Bechterew. *Centralblatt für Nervenheilkunde und Psychiatrie, No. 137, 1901, 25 June.*

The writer refers to a contribution by O. Giese, upon a special form of hereditary nervous affection characterized by tremor, disturbance of motion and feeble-mindedness, and reports a case of similar nature. His patient presented a distinct nervous heredity, all members of the family showing marked defect. The child was born at the eighth month and suffered from hæmorrhage from the navel. The development was tardy and at the fourth year the child could not talk. Before the ninth year the patient had passed through a number of acute diseases, among them measles, whooping-cough, scarlet fever, chicken-pox, and in the ninth year probably meningitis. In her nineteenth year the patient showed some awkwardness in gait, and she then became irritable and depressed, and often spoke of the uselessness of her life. She improved temporarily, but in the following year relapsed, spoke of suicide, and had periods of prolonged irritability. She was then examined by the writer, who found numerous stigmata of degeneracy, mental and physical. The most marked manifestations consisted of tremor and dwarfing of the extremities, with awkwardness of motion and spastic-paretic gait, and without disturbance of sensation. The reflexes were approximately normal. Mentally the patient was markedly undeveloped.

In review of the symptoms of this patient, which consisted of feeble-mindedness, tremor of the extremities and a peculiar gait, to be regarded as cerebellar ataxy, the conclusion is reached that the lesion was one of the cerebral cortex and cerebellum, probably associated with degeneration of the pyramidal tracts and the ascending cerebellar tracts.

Encephalopathia Infantilis Epileptica.

HUGO LUKACS. *Archiv für Psychiatrie und Nervenkrankheiten, Bd. 31, Ht. 1, 1901.*

When epileptic attacks occur in childhood the question arises as to whether or not they are to be regarded as the symptom of some special disease, and it is often established that they are due to some particular form of encephalopathic changes. In such cases there is often observed a whole series of accompanying symptoms, which are entirely independent of epilepsy, and have nothing to do with the idiopathic form of that disease. French authors write of "post-hemiplegic infantile epilepsy," and the Germans of "idiocy with epilepsy;" Strümpell has described "encephalitis infantilis." Lukacs' contribution deals with cases in which the three principal symptoms are hemiplegia, idiocy and epilepsy, and to these he has given the designation by which his paper is entitled. The causes are found both in intrauterine and extrauterine life, the symptoms following late as secondary manifestations after an original trauma, as protracted labor, malposition within the uterus, tumor or intoxication. The lesions are principally porencephaly, sclerosis, cysts, perivascular hypertrophies, hypoplasia, atrophy, and tumor. These conditions may follow scarlet fever, measles, diphtheria, and even, rarely, typhoid fever. Gowers has also given rachitis a prominent place in the etiology. The exciting factor is an injury to the immature brain. The symptoms are both physical and psychical. Heredity is less prominent than is supposed, and the degenerative stigmata are the result of the disease rather than an indication of a bad heredity. Lukacs describes at some length the physical changes, atrophy, paralysis with spasm, athetosis, chorea, epilepsy, and certain indications, in some cases, of bulbar involvement.

The mental symptoms must be regarded both as due to the degeneration, and as a consequence of the accompanying epilepsy. Two prominent features are noted, mental weakness and impulsive acts, that is to say, "moral insanity." This form of mental disorder involves, in the author's opinion, intellectual weakness, and he cites cases of criminal impulsive acts, in which the intellectual faculties were in a pronounced way defective, as well as the moral control of the victim. The patients appeared to have little or no sense of right or wrong, or of shame. In addition there is at times a suspension of consciousness, as evidenced by ignorance of what has happened or of journey taken ("poriomania" of Donath). In general there may be said to be great mental and physical unrest. The epileptiform attacks are varied and may be Jacksonian. The presence of a lesion in the motor regions is not necessary. The author believes, rather, that motor symptoms are due to the irritation arising from the neighborhood of an irritating lesion. The most pronounced indication of the condition of cerebral degeneration is the diminution of the inhibitory power and the easily elicited reflexes. It is not possible to attribute this symptom-complex to any one kind of lesion, but it follows the manifold conditions consequent upon encephalitis and its results, and these anatomical lesions have one thing in common, and that is decisive, that they prevent proper development.

The Condition of the Neuroglia in the Brains of Thirty Insane Patients. (Neurogliabefunde in 30 Gehirnen von Geisteskranken.)

ELMIGER. *Archiv für Psychiatrie und Nervenkrankheiten, Band 35, Heft 1, 1901.*

In simple primary psychoses, melancholia, chronic confusional insanity and paranoia, there was nothing noticeable. There was no overgrowth of the neuroglia and no difference existed between it and normal neuroglia

In secondary dementia there was an increase of neuroglia. The sub-pial neuroglia increased and developed into a thick net of fibres. From this net-work a thick extension into the gray substance was seen. The astrocytes were sparsely represented.

In two cases of periodic psychoses a noticeable increase in neuroglia was present.

In five cases of epilepsy there was in one an enormous increase of the neuroglia. This was an advanced case. In the others who were young, and in whom the disease had only existed a few years, the neuroglia presented no anomalies.

In seven cases of senile organic psychoses, there was an outspoken proliferation of the neuroglia. Astrocytes were present in fairly good number. The excess of neuroglia was fairly diffuse, and was especially notable in the vicinity of the blood vessels. The sub-pial neuroglia was increased, and from it extended a thick net of fibres into the gray substance. In some places there was a marked number of amyloid bodies.

In seven cases of general paralysis there was also an enormous increase of the neuroglia; this was prominent in the occipital lobes but in a different way from that shown in the central convolutions. The capillaries were enlarged and the glia fibres about the vessels were increased. Astrocytes participated in places in the new formation of capillaries.

The writer derives the following summary from this investigation:

1. The brain in general paralysis shows the greatest proliferation of the neuroglia.

2. The other psychoses are also attended by an increase in the proliferation of neuroglia, but not to the extent observed in general paralysis.

3. In all cases in which proliferation of the neuroglia was determined there was a microscopical atrophy of the brain.

4. The occipital lobes revealed less increase of the neuroglia than other areas examined.

5. Only in one case (epilepsy) were there scattered areas of enormous proliferation of the neuroglia; in all other cases the change was fairly evenly distributed over the entire preparation.

ORTHOPEDIC SURGERY

Edited by Arthur W. Elting, M. D.

Arthrolysis and Resection of the Elbow Joint. (Die Arthrolyse und die Resection des Ellenbogengelenks.)

JULIUS WOLFF. *Archiv für klinische Chirurgie, Bd. LXIV., Hft. IV., 1901.*

The writer calls attention to a new method of treatment of ankylosis of the elbow joint. This method devised by himself consists in the removal of all the bony and fibrous impediments to motion without resection of the joint. To this procedure he has given the name of arthrolysis.

This operation has been practiced by him in nine cases already reported, in which the results were good. In four of these cases there was a stiff fibrous ankylosis, while in five it was of a bony character. He reports a further case of bony ankylosis upon which he performed arthrolysis, and which he has studied with the X-ray before and after the operation, the radiographs of which are reproduced. In this case almost all of the joint cartilage had disappeared, the ankylosis was relieved by use of the chisel, the articular ends of the bones smoothed, and so approximated that normal flexion, extension, pronation and supination were possible. The wound was closed and after about two weeks passive motion was instituted and continued for several months—at first with the aid of anæsthesia. The result was most gratifying, active motion at the elbow joint being possible in every normal direction with but slight restriction. This case illustrates the fact that new joint cartilage may form even after the resection of the articular surfaces of the bones. Ankylosis of the elbow joint has hitherto been regarded by most surgeons as a *noli me tangere* because of the bad results usually attending operative treatment. By means of arthrolysis the writer feels that many cases can be successfully treated with little or no danger of a bad result.

Wolff further reports a case of typical resection of the left elbow joint in a child of two and three-fourths years, which he performed 28 years ago and which he has recently studied with the X-ray. At the operation he removed twenty-two millimetres of the humerus, twenty-nine millimetres of the ulna and six millimetres of the radius, thus depriving the diseased ends of the bones of their epiphyses. At the present time both humeri are of the same length, the left ulna is two centimeters shorter than the right, and the left radius one centimeter shorter than the right, thus demonstrating that the humerus and the ulna have grown more rapidly in the diseased than in the healthy arm. The same phenomena have previously been noted by Ollier, Textor and others. This case illustrates the comparatively slight importance, so far as growth is concerned, of the epiphyses about the elbow joint. Of especial importance is the above case in connection with the subject of resection of the elbow for tuberculosis, an operation which Wolff believes to be justifiable and far preferable to arthrectomy, an operation which ofttimes does not disclose the entire extent of the disease and thus minimizes the chances of a cure.

The Result of the Partial Extirpation of the Sterno-cleido-mastoid Muscle in Muscular Torticollis. (Ueber die Erfolge der partiellen Exstirpation des Kopfnickers bei muskularem Schiefhals.)

P. Linser. *Beiträge zur klinischen Chirurgie, Band, XXIX, Heft 2.*

The advances made in modern surgery have led more and more to the operative treatment of torticollis. The extreme of this method of treatment is the total extirpation of the diseased sterno-cleido-mastoid muscle advocated by v. Mikulicz.

It is only in a limited number of cases that v. Mikulicz advocates this operation. Ordinarily he removes only the lower two-thirds of the muscle. Hartmann has analyzed a large number of cases from the Rostock clinic and finds that in only about one-third of the patients in which simple tenotomy was practised has there been a complete recovery. The writer calls attention to the fact that the results of simple tenotomy depend to a certain extent upon how carefully the patient can be observed for a considerable period after the operation. As a rule this is impossible and so it is desirable that we should have a method of treating torticollis which does not demand a long period of supervision and after-treatment.

Simple section of the diseased muscle will not alone effect a cure, but must be followed by months of after-treatment and even then there is a great tendency for the trouble to recur.

The writer considers it necessary to extirpate only the diseased portion of the muscle, which in his experience has usually been a piece 3 to 5 cm. in length. After such an operation there is practically no danger of reunion of the sectioned ends of the muscle, although a considerable amount of function is regained.

The writer recommends the use of a transverse rather than a longitudinal skin incision. This incision is usually from 1 to 3 cm. above the clavicle and parallel to it, and usually from 4 to 5 cm. in length. The cosmetic effect of this incision is very satisfactory. After leaving the hospital, from one to two weeks after the operation, the patients wore a high, stiff paper collar for from one to three months. No other after-treatment was used. The writer reports thirteen cases treated according to this method, with the most satisfactory results. Practically all the patients could raise the head while lying down, which is the test of the function of the sterno-cleido-mastoid muscle. This leads one to assume that the stump of the muscle must have formed some attachment to the thorax and this attachment is afforded by the sheath of the muscle which is attached to the clavicle and the sternum. The scoliosis as well as the facial asymmetry showed marked improvement after the operation.

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Original Communications

TENDON TRANSPLANTATION IN THE TREATMENT OF PARALYTIC DEFORMITIES.*

BY ARTHUR W. ELTING, M. D.,
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Until within the last decade no chapter of surgery has been more unsatisfactory in its results than the treatment of paralytic deformities. From early times attempts have been made to supply by means of a great variety of apparatus the functions lost as a result of paralysis or injuries of muscles, nerves and tendons. In a few instances these attempts have been fairly successful, but in the vast majority of cases the results have been unsatisfactory and the atrophy of the muscles incident to the use of many forms of apparatus a decided disadvantage.

A great advance was made in the treatment of certain paralytic deformities when Albert proposed and practiced arthrodesis. The operation soon became a popular one, as evidenced by the amount of literature upon the subject. While in many instances arthrodesis improved the condition of the paralyzed member, nevertheless the results were far from satisfactory.

The introduction of tendon transplantation in the treatment of paralytic deformities was unquestionably the greatest advance ever made in the management of this class of cases. The credit for this brilliant idea has usually been accorded to Nicoladoni, but in reality belongs to Duplay[1], who in 1876 employed the procedure in the treatment of a case of traumatic loss of function of the arm. Nicoladoni[2], however, in 1881 first transplanted healthy tendons to correct a talipes calcaneus deformity resulting from a complete paralysis of the calf muscles and an almost complete paralysis of the flexors of the foot. He divided the tendons of both peronei muscles and attached them to the tendo Achillis, splitting the tendo Achillis upward for eight centimeters, and attaching the tendons of the peronei between the split portions. The result was most satisfactory, and Nicoladoni expressed the view that the transplantation of healthy tendons would be of much value in the treatment of cases of pes equinus paralyticus. Hacker[3] in 1886 reported a favorable result in a case similar to Nicoladoni's. Lipburger[4] in 1889 sutured the tendon of the gastrocnemius to the peripheral end of the traumatically severed tendons of the peronei, and thus corrected a varus deformity. For practically ten years after the publication of Nicoladoni's article the precedure advocated by Duplay and himself attracted no attention.

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*Read at the annual meeting of the Medical Society of the State of New York, January 28-30, 1902.

In 1892 Brobnik[5] reported seven cases in which favorable results had followed the transplantation of tendons in the treatment of paralytic deformities. Among this number Drobnik reported the first case of tendon transplantation for the treatment of a paralytic deformity of the hand. As a result of an infantile spinal paralysis, the child sustained a palsy of the extensor digitorum communis, the extensor carpi ulnaris, the interossei and the abductor pollicis muscles. Marked improvement followed the transplantation of the tendon of the extensor carpi radialis to the extensor digitorum communis.

Phocas[6] in 1893 reported a favorable result in a case of talipes calcaneus paralyticus in which he transplanted one of the peroneal tendons to the tendo Achillis.

Winkelmann[7] in 1894 reported a favorable result in a case in which he sutured the tendon of the gastrocnemius to the peripheral end of the paralyzed peroneus longus and then sutured the tendon of the paralyzed peroneus brevis to that of the longus.

The first to practice tendon transplantation in America was Parrish[8], of New York, who in 1892 reported a favorable result in a case of pes valgus paralyticus. He was followed by Milliken[9], of New York, who in 1895 reported one case of successful transplantation of a part of the tendon of the extensor hallucis to the tibialis anticus. In 1896 he reported nine further cases, among the number being two cases of transplantation of the sartorius to the paralyzed quadriceps extensor tendon, one of which was successful. Milliken seems to have labored under the idea that the procedure of transplanting healthy tendons was an original one with himself.

Ghillini[10] in 1895 reported a favorable result in a case of pes valgus paralyticus in which he sutured the tendon of the peroneus longus to the tendon of the tibialis anticus.

Krynski[11] in 1895 reported a case of traumatic severing of the flexor tendon of the right middle finger in which it was impossible to unite the severed ends. The distal portion of the tendon was, however, sutured to the neighboring flexor tendon of the index finger, and a good result was obtained.

Since 1896 a considerable number of articles have appeared upon the subject, and a large number of satisfactory results have been reported.

Franke[12] in 1896 collected fifteen cases from the literature and reported two of his own, in all of which the results were satisfactory.

Goldthwait[13], of Boston, in 1896 published a very excellent article upon the subject, in which he discussed the operation in considerable detail, and outlined a method of suturing the tendons which has been very generally adopted. He reported four cases in all of which the results were very satisfactory.

Bradford[14], of Boston, in 1897 published an article upon the subject of tendon surgery, in which he devoted considerable attention to the subject of tendon transplantation and strongly recommended its use in the treatment of paralytic deformities.

Eve[15] in 1898 published the first article in England upon the subject of tendon transplantation. He discussed in considerable detail the technique of the operation, and reported four cases of paralytic deformities of the feet in all of which the results of tendon transplantation were most satisfactory.

Brunner and Schultess[16] in 1898 reported two cases of paralytic deformities of the feet and one of the hand, all of which were greatly improved by tendon transplantation.

Gocht[17] in 1899 reported eighteen cases from Hoffa's clinic;

three of peripheral paralysis, thirteen of spinal infantile paralysis, one of cerebral infantile paralysis and one of a spastic condition of the legs. In all of these cases tendon transplantation was practiced with very satisfactory results.

Keiler[18] in 1899 reported an excellent result in a girl of eighteen, a case of extensive tendon transplantation in the arm to correct a marked paralysis following a hemiplegia at two years of age.

Ludwig[19] in 1899 reported nine cases of successful tendon transplantation from the clinic of Mikulicz.

Lange[20] in 1900 reported six successful cases, three of paralytic deformities of the feet and three of paralysis of the quadriceps extensor muscles, in all of which he obtained excellent results.

Vulpius[21] has published by far the greatest number of cases; his latest communication in 1900 included the report of 160 cases upon which he had operated and the results of which have made him a most enthusiastic advocate of the procedure.

Kunik[22], Coolidge[23], Cone[24], Tubby[25] and Noehte[27] in the past year have also published articles urging strongly the more general employment of tendon transplantation, and reporting a number of satisfactory results.

From a brief survey of the literature upon the subject it is apparent that tendon transplantation has aroused but comparatively little interest in America, the communications upon the subject being limited to those of Parrish, Milliken, Goldthwait, Bradford, Townsend, Coolidge and Cone. On the continent, however, the interest manifested in the subject has progressively increased, until to-day the operation is practiced in practically all of the large continental clinics, and the universal sentiment of all who have employed the procedure is decidedly in its favor.

The conditions in which tendon transplantation is indicated may be grouped under four general headings:

(1) traumatic loss of muscles and tendons;

(2) spinal infantile paralysis;

(3) spastic paralysis, Little's disease, cerebral infantile paralysis, hemiplegia;

(4) congenital deformities, especially club foot.

Spinal infantile paralysis is by far the most common variety of paralysis amenable to treatment by tendon transplantation. The very frequent occurrence of this disease among young children furnishes an abundance of material of this character. They are also the cases most suitable for operation, for the paralysis is but rarely a complete one; usually a single muscle or a group of muscles is alone involved and the legs are more often affected than the arms. Furthermore, Vulpius has demonstrated that complete paralysis occurs only infrequently, and is by no means always present when all active motion is gone. In cases of partial paralysis, tendon transplantation is especially indicated, while in cases of almost complete paralysis one must choose between arthrodesis, tendon transplantation and apparatus. The more circumscribed the paralysis, the closer the proximity of healthy muscles and tendons, the more satisfactory will be the result. The conditions are most favorable about the foot and lower leg, because the tendons are well formed and are situated comparatively near to each other. The conditions in the upper leg are less favorable and those in the arm still less. Cases especially suited for operation are those in which a group of muscles has been partially or completely paralyzed and the antagonistic group is normal or approximately so.

Certain cases of congenital club foot are associated with a weakness of certain groups of muscles, and in those cases tendon transplantation is often useful in helping to maintain the foot in the corrected position and to establish a more nearly normal equilibrium of action of the muscles.

The question as to when to operate upon cases of paralysis is usually an easy one to decide. So long as there is any evidence of spontaneous improvement, one should refrain from operation and should employ the usual means indicated in such cases, namely,—massage, gymnastics and electricity. Spontaneous improvement usually ceases from one to two years after the acute attack. When for some months no further improvement has been noticed, or when for any reason the deformity is growing more marked, operation is indicated. In certain partial paralyses the power remaining in the unaffected or partially affected muscles may be a decided disadvantage, owing to the fact that their antagonists being paralyzed, the part is pulled more or less out of its normal position, and under such conditions the deformity often tends to gradually grow worse. When such a condition has existed for some considerable period there is a marked tendency toward the development of a bone deformity, the bones of the part tending to shape themselves in conformity with the new position of the part.

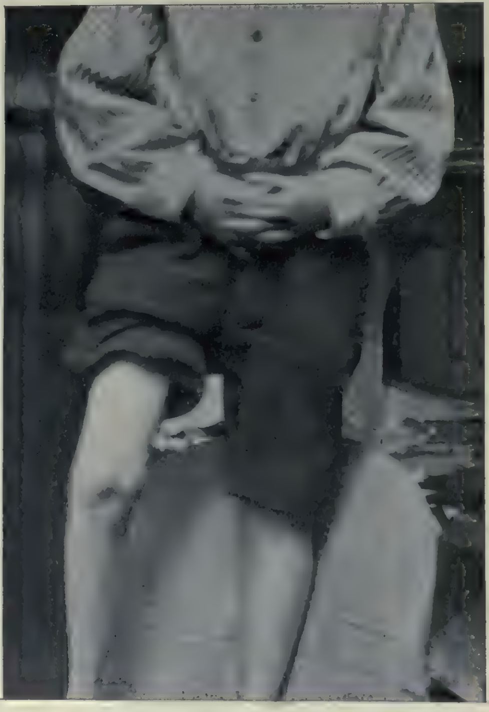
A thorough knowledge of the anatomy of the part and of the function of the muscles is absolutely necessary, and in every instance a most careful examination of the paralyzed member should be made to determine what muscles are paralyzed, what muscles need strengthening and what muscles can be used. If possible, careful electrical tests of the reaction of the muscles should be made, for only in this way can an accurate estimate be formed of the condition to be dealt with.

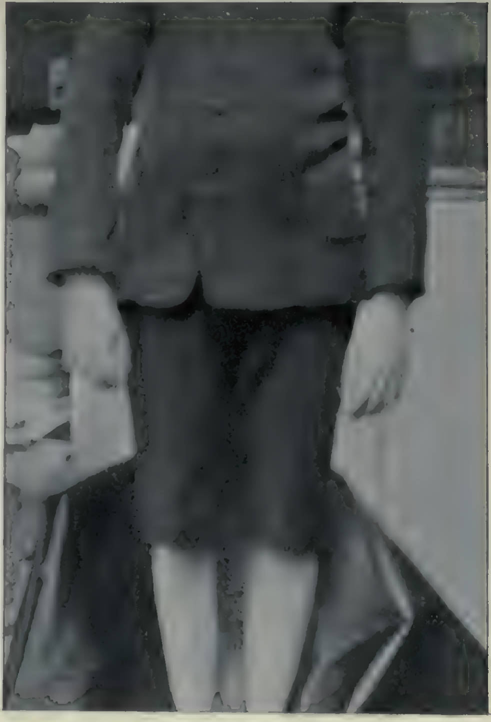
The usual deformities of the feet resulting from paralysis of certain groups of muscles are pes calcaneus, pes equinus, pes equino-varus, pes equino-valgus and pes valgus. In certain cases of long standing, when a pronounced deformity has developed, it is often desirable to correct, so far as possible, the deformity by means of tenotomy and manual redressment, keeping the member in plaster for a considerable period of time as a preliminary to the transplantation of the tendons later.

The technique of the operation varies with the muscles paralyzed. It is, however, absolutely necessary that some one group or part of a group of muscles be possessed of a moderate amount of power. Each case requires separate consideration, and a certain amount of mechanical ingenuity must be exercised. In some cases it is advisable, if possible, to select for the transplantation a muscle whose action resembles as closely as possible that of the paralyzed muscles, both because such muscles are usually situated nearest to the paralyzed muscles as well as because voluntary function is apt to be restored more readily. In other cases, however, it is advisable to select one of the antagonists for transplantation, in which instance the result is twofold, that is, the restoration of the paralyzed function and the lessening of the action of the antagonists, which tend to produce the deformity. The incision to be employed will differ with the case and with the tendons to be exposed. Vulpius advises the use of free incisions in order that the condition of the muscles may be inspected and an estimate formed of the extent of the degeneration. Eve, on the other hand, advises against long incisions in the feet, because of interference with the venous circulation and the subsequent œdema.

To Illustrate Dr. Elting's Article on "Tendon Transplantation in the Treatment of Paralytic Deformities."

Albany Medical Annals, April, 1902.





Four different methods of tendon transplantation have been employed:

The simplest method consists in dividing the tendon of a healthy muscle and suturing its central portion to the tendon of a paralyzed muscle. The chief objection to this method is the sacrifice of the normal function of the transplanted tendon.

The second method consists in dividing the tendon of the paralyzed muscle and attaching its peripheral portion to the tendon of a healthy muscle. This method has been called by Vulpius the ascending transplantation. Hoffa[26], on the other hand, prefers to call it the passive method, because an inactive passive tendon is transplanted to a normal, or active one.

The third method consists in splitting the tendon of a healthy muscle and transplanting only a part of the tendon to the tendon of the paralyzed muscle. This is the most logical, and when it can be used, the most satisfactory method, because the function of the transplanted muscle is not sacrificed. In contradistinction to the second method, this has been called by Vulpius the descending method, and by Hoffa the active method.

A fourth method, namely, the periosteal method proposed in 1896 by Drobnik, has been advocated by Lange. According to this method, the transplanted tendons are attached directly to the periosteum. The advantages claimed are twofold: first, that a more secure attachment of the tendons is obtained than is possible where a healthy tendon is sutured to one that is paralyzed, and second, the greater freedom allowed in the attachment of the transplanted tendons.

The method of suturing the tendons most generally employed is that advocated by Goldthwait, in which the paralyzed tendon is split and the transplanted tendon, having been scored along its edges to promote rapidity of union, is passed through the paralyzed tendon and fastened to it by quilted sutures. Catgut, kangaroo tendon and silk are used as suture material, but silk seems to be the most satisfactory.

In cases of partial paralysis, the contraction of certain of the non-paralyzed muscles necessitates either tenotomy or lengthening of the tendons before the foot can be brought into the normal position. Lengthening of the tendons is a more desirable procedure than tenotomy, because the continuity of the tendon is not destroyed.

Cases occur in which the existence of a deformity of the part has caused a marked lengthening of certain normal or nearly normal tendons. In such cases it is very desirable that the tendons should act in the most advantageous manner in the corrected position of the foot, and in order that they may do this it is often necessary to shorten certain of the elongated tendons. This may be accomplished either by excision of a portion and suture, or by division of the tendon and suture of the overlapped ends, or finally by folding the tendon upon itself without division of the continuity.

In many cases, therefore, it will be very desirable to combine tendon transplantation with tendon lengthening or tendon shortening, or both. The tendons should be so transplanted and sutured as to hold the part in the corrected or slightly over-corrected position. The change of direction of the tendons should be gradual and not at right angles, and there should be no slack in order to insure against loss of power in contraction.

Lange has introduced an ingenious device in the treatment of paralysis of the quadriceps extensor tendon, which has produced very excellent results in three cases. Lange found that certain cases in which one attempted to suture transplanted tendons to the quadriceps extensor tendon resulted unfavorably, because of the softening and friability of the paralyzed tendon. To obviate this difficulty he employed a device recommended by Gluck and Kümmell for the treatment of traumatic defects of tendons. He severed the tendons of the biceps and semitendinosus from their attachments and sutured them together over the quadriceps extensor tendon. From the ends of these sutured tendons he passed a number of silk sutures subcutaneously over the patella and attached them to the periosteum of the tibia. Connective tissue developed around these sutures, and the results were excellent; all of the patients being able to extend the leg at the knee.

In a recent article, Lange[28] presents the results of the use of what he calls "silk tendons" in fifty-six cases. He now uses the above-mentioned device in the transplantation of all tendons in which the tendons are too short to allow their attachment to the point desired. In certain cases he has simply passed several silk threads subcutaneously from a healthy tendon to the periosteum, where he wished to transfer a part of the muscular action, and has found that around these threads a tendinous structure develops which functions as well as a tendon, and in some instances is as thick as a lead pencil. Thus one is enabled to transfer a part of the action of a muscle without weakening its tendon. In certain cases the distance bridged over by the silk threads has been as much as twenty centimeters. In only two of the fifty-six cases did the silk threads fail to remain in place, and none of the wounds suppurated. In one case Lange had an opportunity, during a subsequent operation, to remove a small portion of a "silk tendon" in the center of which the silk threads were present, and around this was a zone two-thirds of a millimeter in thickness which presented the histological structure of pure tendon. There was no demonstrable tendon sheath.

After all operations in which tendons have been transplanted the extremity should be put up in plaster in a normal or slightly over-corrected position. The extremity should be kept thus immobilized for from four to eight weeks to allow the tendons to become firmly united to their new attachments, after which massage, passive and active motion and electricity should be employed. As a rule it will not be necessary to use any specially constructed shoe or apparatus in the after treatment.

The results of the operation will in the great majority of cases be most gratifying. A weak muscle cannot be made to do normal work, but when it works advantageously it tends to grow stronger and more efficient. Furthermore, an hypertrophy of the transplanted muscle often occurs sufficient to enable it to do all the work required of it. It has also been observed that a muscle apparently completely paralyzed will regain part of its function by the transplantation of a healthy muscle. The result will by no means be a perfect one immediately after the removal of the plaster dressings, but it invariably improves, often in a most astonishing manner during the after treatment and active exercise of the part.

In a great majority of instances voluntary control of the new function of the transplanted muscles develops. The explanation of the physiological and neurological basis for the voluntary control of the function of a transplanted muscle is not especially difficult. Each voluntary muscle of the body is presumably controlled by a group of cortical cells which ordinarily act together.

When part of a tendon is transplanted and the function of the muscle is divided, a division of activity of the cortical cells governing the muscle will gradually develop. When the transplanted tendon functions it produces a new sensation of which the individual is conscious, and gradually this sensation becomes definitely associated with the new function of the muscle, and voluntary motion becomes possible in just the same manner as voluntary function of the muscles develops in the new born child.

In cases where voluntary control of the transplanted muscles is not established, the transplanted tendons will tend to hold the foot in a normal position by their mechanical action, and the involuntary contractions will furnish the necessary stability. The circulation and nutrition of the limb is invariably improved after the operation, and in some instances the growth of the bones of the paralyzed limb is accelerated, thus tending to overcome the deformity resulting from the impaired growth of bone which often follows paralysis of a limb.

In the following cases occurring in his service at the Child's Hospital, the writer has practiced tendon transplantation in the treatment of deformities of the feet resulting from paralysis of the muscles.

Case No. I. K. V. H. Aged eight years, referred by Dr. Hun. Four and one-half years ago patient had an attack of anterior poliomyelitis which left both legs partially paralysed below the knee. Patient was practically helpless for five or six months following the attack, after which improvement began and at the end of one year she could stand and take a few steps with the aid of crutches. Both legs appeared to be equally affected. There was slight improvement in the condition of the legs up till one year prior to her admission to the Child's Hospital.

When first seen in February, 1901, patient was able to walk only with great difficulty; there was a marked talipes valgus deformity of both feet, the left being the worse. When patient attempted to walk she seemed to have great difficulty in raising the toes and the balls of the feet from the floor; there was a marked unsteadiness of the gait. The muscles of both legs were atrophic, soft and flabby and the circulation very sluggish. Dorsal flexion of the toes and feet and supination of the feet were impossible. Pronation was normal. Electrical examination of the muscles of the legs showed a complete paralysis of the tibialis anticus in both feet and an almost complete paralysis of the extensor longus hallucis and extensor communis digitorum of both feet. All the other muscles and nerves of the feet appeared to be normal.

The same operation was done upon both feet, which consisted in exposure of the tendons of the peronei muscles behind the external malleolus and section of the tendon of the peroneus longus well down under the foot. A tenotomy of the tendo Achillis was done through the incision over the peronei. An incision was next made on the inner side of the foot over the tendon of the tibialis anticus which was exposed. The tendon of the peroneus longus was transplanted subcutaneously across the front of the ankle and attached to the tendon of the tibialis anticus well down under the inner edge of the foot and to the adjacent periosteum. This effectually overcame the deformity and after closing the wounds the feet were put up in an overcorrected position in a plaster dressing reaching to the knee. The first dressing was done at the end of ten days, when another plaster dressing was applied and the feet kept in plaster for about six weeks, after which massage, passive and active motion and electricity were used and the patient was gradually allowed to walk.

The results in both feet are most satisfactory. The patient is now able to lift the feet well in walking and the tendency for the toes and the ball of the foot to fall forward is entirely overcome. The position of the feet is practically normal and the valgus is entirely corrected. The patient walks well and is able to ride a bicycle. Dorsal flexion, supination and pronation are possible. Patient has already gained slight voluntary control of the transplanted muscles. The nutrition of the feet and legs is greatly improved as is the circulation.

Case No. II. H. G. Age five years, referred by Dr. Hun. Patient suffered from an attack of anterior poliomyelitis shortly after birth, as a result of which there was extensive paralysis of the muscles of both legs. She has always had the greatest difficulty in walking as well marked unsteadiness of gait. During the past two years no improvement has been noted.

When admitted to the Child's Hospital in February, 1901, the patient when standing presented an extreme dorso-lumbar lordosis which resembled that seen in congenital dislocation of the hips. When sitting or lying the back became perfectly straight and of normal appearance. There was no weakness of the muscles of the back or upper extremities. The lordosis when standing was found to be due to an extensive paralysis of the pelvo femoral and pelvo-trochanteric muscles. The ileo psoas and pectineus, as well as the gluteal and adductor muscles were almost completely paralysed on the left side and partially paralysed on the right. As a result of this extensive paralysis active motion at the left hip joint was practically absent while passive motion was possible beyond the normal limits. On the right side there was some active motion about the hip joint, but it was extremely weak. The quadriceps extensor was completely paralysed on the left side and partially paralysed on the right. The flexor muscles of the left knee were all paralysed, except the biceps, while the flexor muscles of the right knee were considerably weakened. The right foot presented an extreme valgus deformity. Dorsal flexion of the toes and foot and supination of the foot were impossible and pronation was very weak and limited. The peroneal tendons were displaced anteriorly and were located over the external malleolus. The left foot presented a less marked valgus deformity. Dorsal flexion of the toes was impossible. Dorsal flexion of the foot was weak. Supination was impossible, and pronation was very slight and weak. The muscles of the hips, thighs and legs were flabby and atrophic. Electrical examination of the muscles of the legs showed a complete paralysis of the tibialis anticus, the extensor digitorum communis and the extensor longus hallucis and a partial paralysis of the peroneus longus and brevis on the right side and a complete paralysis of the tibialis anticus, a partial paralysis of the peroneus longus and brevis and the extensor longus hallucis on the left side.

The operation upon the right foot resembled in all particulars that already described in Case No. I, the tendon of the peroneus longus being severed from its attachment and sutured to the tendon of the tibialis anticus at the inner edge of the foot. The tendon of the peroneus longus was, however, very soft, flabby, and atrophic and it was evident that there was considerable paralysis of the muscle; a tenotomy of the tendo Achillis was also done.

The operation on the left foot differed somewhat from that on the right, an incision over the tendon of the tibialis anticus allowed the exposure of that tendon as well as the tendon of the extensor digitorium communis and extensor longus hallucis. The tendon of the extensor longus hallucis was split longitudinally and the inner half freed and sutured to the tendon of the tibialis anticus at the inner margin of the foot. The tendon of the extensor digitorum communis was sutured to the tendon of the tibialis anticus for a distance of three centimetres. At the conclusion of the operation the feet were held in a good position by the transplanted tendons; a plaster dressing was applied with the feet in an over-corrected position. The first dressing was done at the end of ten days, when the plaster dressing was reapplied and the feet kept in plaster for six weeks, after which massage, active and passive motion and electricity were employed, and the patient gradually allowed to use the feet in walking.

The result eight months after operation is very satisfactory. The position of the feet is decidedly improved and the valgus much less marked. Patient lifts and manages the feet much better in walking than before the operation and is far more steady on the feet. Prior to operation patient dragged the toes in walking. This, however, is entirely corrected. Dorsal flexion of both feet is possible to a moderate degree as is pronation. Supination is, however, weak and limited. The nutrition and circulation of the feet and legs is much improved. The patient still experiences considerable difficulty in walking owing to the extensive paralysis of the muscles of the hips and thighs.

Case No. III. R. V. H. Age eleven years. Referred by Dr. Robins, Northville, N. Y.

Five years ago the patient suffered from an attack of anterior poliomyelitis which caused a partial paralysis of the muscles of the right leg. For almost four months after the attack the patient was unable to walk, but the leg gradually improved so that he was able to get around fairly satisfactorily, although he always limped badly and the leg was very weak. One year prior to admission to the Child's Hospital, the patient's foot began to be noticeably deformed in such a way that the patient walked on the toes and could not place the foot squarely on the floor. The deformity gradually increased until on admission to the hospital in November, 1900, there was an extreme equino varus deformity of the right foot associated with which was some bony deformity, the anterior portion of the astragalus being abnormally prominent. The right foot was one and one-half centimetres shorter than the left and the right tibia and fibula two and three-fourths centimetres shorter than the left. The muscles of the leg were flabby and atrophic, this condition being most marked in the muscles on the anterior aspect of the leg. There was very little active motion possible at the right ankle joint. The circulation of the leg was sluggish and the condition of the skin indicated more or less trophic disturbance.

Examination showed an almost complete paralysis of the peroneal muscles, a partial paralysis of the extensor communis digitorum and of the tibialis anticus. The extensor longus hallucis was normal. There was a marked contraction of the tendo Achillis and a slight contraction of the plantar fuscia. The circumference of the right thigh measured two and one-half centimetres less than that of the left, and the circumference of the right calf measured four centimetres less than that of the left.

The operation consisted in a preliminary subcutaneous tenotomy of the tendo Achillis, after which an incision was made over the tendon of the tibialis anticus and the tendon exposed for a distance of seven centimetres. Through the same incision it was possible to expose the tendon of the extensor longus hallucis for a similar distance. The tendons of both the tibialis anticus and the extensor longus hallucis were split longitudinally and the outer half of each tendon separated and transplanted subcutaneously to the outer side of the foot, where by means of an incision four centimetres long the periosteum over the base of the fifth metatarsal bone and the cuboid bone was exposed. The periosteum was dissected away from the bone and the transplanted tendons firmly sutured to it for a distance of one and one-half centimetres. The remaining portion of the tendon of the extensor longus hallucis was shortened by folding it upon itself. When the operation was completed the foot was in practically a normal position. A plaster dressing was applied with the foot in an overcorrected position. At the end of ten days the first dressing was done and the foot kept in plaster for about twelve weeks, after which massage, electricity and active and passive motion were employed and the patient was gradually allowed to walk. To compensate the shortening of the right leg a high-soled shoe was placed upon the right foot.

The result six months after the operation was most gratifying. The patient regained all the normal motions of the foot, although pronation and supination were somewhat restricted. The position of the foot was practically normal. There was also some voluntary control of the transplanted tendons. The circulation and nutrition of the leg were greatly improved. One year after the operation, patient's mother writes that the foot has continued to improve during the past six months. The patient walks well; the motions of the foot are almost normal. The position of the foot is normal.

Case No. IV. H. V. S. Age four years. Referred by Dr. Mosher. Patient had suffered since birth with congenital talipes equino-varus of both feet. Operations for the correction of the deformity had been twice performed upon the feet prior to admission to the Child's Hospital, early in 1901. When first seen the patient presented an extensive equino-varus deformity of the left foot, which could not be reduced manually. The right foot presented a less marked equino-varus deformity which could be readily corrected passively, but which could not be actively held in a normal position because of an extreme weakness of the peroneal muscles. There was no history of an anterior poliomyelitis and the muscular weakness appeared to be one associated, as not infrequently happens, with the congenital club foot. The extreme weakness of the peroneal muscles coupled with the antagonistic action of the tibialis anticus appeared to be in the main responsible for the existing deformity.

The operation on the right foot consisted in exposing the tendons of the tibialis anticus from the anterior aspect of the ankle to the inner side of the foot. The tendon was split longitudinally and the outer half transplanted to the outer side of the foot, where in a manner exactly similar to that described in Case No. III it was attached to the periosteum over the cuboid and the head of the fifth metatarsal bones. When the operation was completed the transplanted tendon held the foot in an almost normal position. A plaster dressing was applied with the foot in an overcorrected position. The first dressing was done at the end of ten days, when plaster was reapplied and the foot kept in plaster for about twelve weeks.

The result in this case was very satisfactory, the foot being held in practically a normal position, the equino-varus deformity entirely corrected and a moderate amount of pronation being possible.

In conclusion, it may be said that from a careful study of the literature upon the subject, as well as from personal experience, the writer feels justified in strongly advocating tendon transplantation as the most satisfactory method of treatment yet suggested for the management of many deformities due to muscular paralysis or weakness.

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AN UNUSUAL CASE OF ABSCESS OF THE LIVER.*

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Abscesses of the liver are due to the entrance of pyogenic bacteria or amœbæ coli, rarely of actinomyces or coccidia and very seldom of a chemical agent. The causative material may enter directly by means of a wound or by the blood vessels or the bile ducts. Abscesses of the liver of vascular origin may result as well from thrombosis as from embolism, the infecting thrombus being directly continued from the inflammatory or ulcerative process in the radicles of the portal vein or from the umbilical vein into the liver.

It is probable that abscesses occurring in the tropics are due to the causes above mentioned, *i. e.*, amœbæ coli, and their frequency may be accounted for by the prevalence of amœbic dysentery in that climate, especially since Hartulis, Councilman and others have shown the relation of the amœbæ coli to dysentery and abscesses of the liver. Likewise Kiener and Kelsek have shown that dysentery was present with hepatic abscess in eighty-five per cent. of 314 cases. In carefully examining any series of cases of tropical abscess of the liver we cannot fail to be impressed with the frequency with which dysentery is mentioned.

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Up to within the past year or two most of our knowledge of tropical abscess of the liver has been derived from India, and looking at the records of these cases quite impartially it is evident that the question of dysentery, in some way or other, appears very frequently. Now that our own army has had three years in the Philippines we ought to have some very interesting papers and statistics on the connection between dysentery of amœbic origin followed by abscess of the liver.

The following case is reported, not so much because it is thought to be a case of amœbic abscess of the liver, following amœbic dysentery, as from the rarity of the locality where it pointed and was opened. The case was originally diagnosed as empyema and was so treated until ten days after the operation when the dressings were saturated with a profuse discharge of bile, which continued until the sinus closed.

The history of the case is as follows:

Mr. F. M., born May 25, 1878; native of the United States; clerk by occupation; has had none of the usual diseases of childhood.

Family history. Father, aet. 56, died very suddenly in October, 1901. No autopsy, but death thought to be the result of asthma. Previously always well, although much troubled with a cough. Mother died in 1889, age not known. Supposed always to have been in good health. Patient has no brothers; one sister, who died in infancy.

Present illness. Enlisted in U. S. Artillery, April 25, 1898. Was sent to New York, and from there to Tampa, arriving in August, 1898. Remained in Tampa one month, when yellow fever broke out and he was returned to Fort Totten, New York Harbor. While in Tampa was troubled some with headache. Remained in different ports in New York Harbor until mustered out of service in February, 1899. He returned to work in a grocery store and remained until he re-enlisted, July 18, 1899. Joined the 26th U. S. Volunteer Infantry and was sent to Plattsburgh. Left there September 5th for San Francisco, via Boston and Providence. Arrived at San Francisco September 17th, was quartered at the Presidio, remained there eight days, and on September 25th sailed for the Philippines. Stopped at Honolulu and arrived at the Island of Pinay October 27, 1899, remaining until November 11th, 1900. Had an attack of dengue fever and remained in quarters for five days.

About five months after reaching the Island of Pinay, he was seized with a sudden attack of acute dysentery, which kept him in the hospital for about a month. At one time he had from twenty to thirty passages a day.

The dysentery gradually grew better, but he never had less than from five to ten passages a day. He returned, however, to light duty at the end of six weeks, sailed for Manila November 11th, reached there November 25th, and remained until November 28th, 1900. Was then sent home as a convalescent from dysentery. Went on board vessel November 28th, sailed December 1st, and reached San Francisco December 31st, 1900. Dysentery continued the same. Was in the 3rd Artillery quarters until January 8th, 1901, when he was discharged. Patient came directly to Albany, reaching here January 15th, and at that time he had about seven passages a day. Diarrhœa continued the same until March, when it grew better and he went to work in West Albany Car Shops. Worked there until May 25th, when the trouble began again. Was his own physician until October 8th, when he entered the County Hospital, at this time generally having from eleven to twelve watery passages daily. In the middle of July he first noticed a pain in the right side. The side gradually enlarged and breathing became more difficult until he entered the hospital. Had loss of appetite; stated he had been unable to locate cause of dysentery. At one time thirty-five men of his company were in the hospital for the same trouble. The dysentery seemed to come on suddenly, and the disease at the time was prevalent in the town of Haro, Island of Pinay. Patient stated that about one-fourth of the men who had dysentery developed abscess of the liver. His stools were examined and attending physicians said found full of germs—probably amœbæ.

I am indebted to Dr. W. G. Lewi for the following facts, obtained after patient's entrance to the County Hospital, October 8, 1901:

Upon admission patient complained of pain in right side, which had lasted for six months. There were some cough and dyspnœa. Upon examination there was a distinct bulging on the right side of four or five inches or more. Percussion revealed flatness of whole right side below the fourth rib, and dullness above that. Respiratory sounds very indistinct; left side also dull. Breathing very bad; had chills and sweats, which ceased and then reappeared again. At the end of twenty-four hours he was aspirated by Dr. Lewi, the needle being introduced between the sixth and seventh ribs, one-half inch to the front of the axillary line. About three and one-half pints of a chocolate-colored fluid were withdrawn. Upon introducing the trocar, there was a very jerky feeling almost as if solid tissue were giving away. Unfortunately, no pathological report upon the fluid was obtained. Neither was there a record kept of the pulse and temperature. The patient was transferred to the Albany Hospital October 16th, 1901, and operated upon October 19th.

The following is a report of the operation: Curvilinear incision over the seventh rib. Portions of the seventh and eighth ribs were resected when about 1,000 cubic centimeters of a dark, brownish-looking pus escaped. Cavity curetted out with a blunt douche curette, using boric acid solution. Large quantities of thick, cream-like membrane removed. For drainage one towel and three vaginal iodoform gauze tampons were used; ends of wound closed with catgut sutures.

The report from the Bender Laboratory in regard to the specimen of fluid is as follows: The pus contains polynuclear leucocytes and desquamated epithelial cells, but no distinct micro-organisms can be made out. No tubercle bacilli were found. Cultures were negative after seventy-six hours in the thermostat. The pus is probably due either to tuberculosis or to a pneumococcus infection, the pneumococcus having died out.

The patient's temperature immediately dropped to ninety-six after the operation, his pulse to eighty, and he was very weak. However, he rallied from the shock of the operation in about twelve hours, and after that made a slow but uninterrupted recovery. For the first week the wound discharged the dark, brown-looking pus, but after that the discharge was almost a pure bile. At the same time his dysentery, which had almost ceased for a period, returned, and finally was only checked with the greatest difficulty.

The following are the only cases similar to this one that I have been able to find reported in the literature upon this subject: Dr. E. W. Boughton reports a case in the London *Lancet* for August 22, 1901, of an hepatic abscess, implicating the pleura, lung, kidney and colon. In this article he describes the case of a man who first had an hepatic abscess, then an empyema of the right side, which was opened and a part of the sixth rib resected. After that an abscess of the lung formed which finally healed. About a year after the patient also developed an abscess which discharged through the colon and right kidney. After all these troubles the man recovered.

Dr. William P. Northrup reports a case in the *New York Medical Record,* February 2, 1884, of a man 35 years of age, who had always been in the best of health, except for an occasional attack of gall stones. May 13, 1883, he was seized with an attack which lasted about six weeks. At the end of that time an examination of the chest showed fluid on right side to the middle of the scapula; left lung normal. The chest was opened and upon puncturing the pleura there was a puff of most offensive gas and at every effort of the patient to breathe a dash of fetid pus. Upon introducing, and passing the sound downward, the whole liver was found to be rotten with abscesses. A drainage tube was inserted and free drainage established. The amount of pus during, and just after the operation, is estimated at four quarts. The patient made a tedious but good recovery.

In the London *Lancet* for December 4th and 11th, 1897, is an excellent article on "Tropical Abscess of the Liver," by C. W.

Windsor, M. D. In this article he reports a series of 58 cases of tropical abscess of the liver occurring at the Dreadnought Seaman's Hospital, only four of which terminated by opening into the right pleura.

The favorite seat of opening of a liver abscess seems to be the right lung, the pus being coughed up and expectorated through the bronchi. Abscess of the liver has also been known to empty into the left lung, right pericardium, frequently into the abdominal cavity, and Dr. Flexner even reports two cases which opened into the inferior vena cava.

In the case which I have just reported it seems fair to assume that the abscess opened into the right pleural cavity, inasmuch that as soon as it was opened the lung resumed its normal function, and that at no time did the patient expectorate any blood or pus, which would have been the case had the abscess been in the lung.

REPORT OF A CASE OF EMBOLISM OF THE POPLITEAL ARTERY, FOLLOWING PNEUMONIA.*

By R. H. IRISH, M. D.,

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As far back as 1874, Dr. Samuel B. Ward, then of New York and surgeon to the Presbyterian Hospital, now of Albany, published a case of embolism of the popliteal complicating heart disease, which had occurred in his own practice, and gave as his reason for so doing the "rarity of this condition, together with the poverty of literature in our own language upon the subject."

Though some twenty-seven years have passed since that time, I can still give this same reason for presenting the following case which occurred in my own practice some two months since. I find that the text books in our own language contain very little upon this subject which would aid one in the recognition of this condition, and I am unable to find a single case in American literature of embolism of the extremities complicating pneumonia, though I see no reason why it would not occur as readily in this as in other diseases. Previous to having this

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case, the only practical knowledge I had of this subject and by which I was able to make an immediate diagnosis was a most impressive lecture by Dr. Ward while I was a student at the Albany Medical College. His paper above referred to, "Embolism of the Arteries of the Extremities," published in the *New York Medical Journal*, March, 1874, is complete and comprehensive, and from no other source have I been able to gain any knowledge of the subject which would add anything of value to the etiology, pathology, diagnosis, prognosis or treatment of this condition.

This case is incomplete, in that I was unable to obtain a *post-mortem* examination, but such as it is I trust that it may prove of interest.

Mr. B. M., aged 29, a native of the Sandwich Islands, and a rancher by occupation.

Family history. Long lived family, free from inheritable disease.

Personal history. Had a slight attack of la grippe 7 years ago and typhoid when a child. Much of his life was spent out of doors and he was a big muscular fellow noted for his great physical endurance.

Present illness. I was first called to see him on October 26th and found him sitting up with a temperature of 104.5° F., cough, and pain in region of right nipple. He gave a history of having had a severe chill the day before. The next day the physical signs of pneumonia of the right lower lobe were well marked. On the fifth day there were moist rales and slight dullness over the lower lobe of the left lung. Up to this time the temperature had been running high, 104 degrees to 105.5 degrees. About this time violent delirium developed, and on the sixth day he twice left his bed, went down stairs and out on the street. The second time he could not be persuaded to go back until I was called. The following morning I removed him to the Samaritan Hospital in the ambulance. Except for the violent delirium and the fact that his fever was evidently ending by lysis, instead of by crisis, the history, symptoms and physical signs were simply those of severe pneumonia and we will not take them up in detail.

Sixth day, temperature in morning, 103 degrees.

Seventh day, morning, on admission to hospital, temperature 101 degrees; pulse, 104, and of good quality; respiration, 30. At 8 p. m., temperature, 101 degrees, pulse 96, respiration 28; delirium milder in character and not constant; sputum still streaked with blood; lungs evidently clearing up. Microscopical examination of the sputum showed presence of the pneumococcus.

Eighth day. Morning temperature, 100.2 degrees; pulse, 98; respiration, 30. *Urine examined:* clear; amber; S. G., 1.030; reaction, acid; contained a trace of albumen. I called in the morning and found patient apparently much improved. There was very slight dullness over lower portion of right lung and extending higher in axillary line. A few moist rales could be heard in the same location. The heart sounds were clear and distinct. He coughs frequently, but expectorates freely. The sputum is still slightly streaked with blood. *4 P. M.:* Quite restless; cough more troublesome; temperature, 100.2 degrees; pulse, 96; respiration 30. *5 P. M.:* It was first noted in chart that the patient complained of pain about the right knee and inability to move the right leg. *8 P. M.:* Temperature, 101; pulse, 90; respiration, 28. Entered in chart that he has considerable pain in right leg and that it was rubbed with soap liniment. *Night report, 10 P. M.:* Large liquid movement; very restless; did not sleep at all during night; mind clear; did not cough as much as usual. *4 A. M.:* Temperature 101.3 degrees; pulse, 82; respiration, 34.

Ninth day. 8 A. M.: Temperature, 101; pulse, 100; respiration, 36; patient quiet. I called at 11 A. M., and found no change in physical signs. I could find no reason for slight increase in number of respirations and pulse rate. As I was about to leave, the nurse called attention to the fact that the patient had complained of pain about the right knee and inability to move the leg, but added that she had seen him unconsciously move the leg. Upon asking the patient about the leg he said it did not pain him as much as on the day before, but that it felt numb. I asked him to raise the leg and he tried and said he could not, but he could and did rotate the leg, and this was undoubtedly what the nurse had observed when she said he moved it. I tried the plantar reflex; it was absent. The patellar reflex was also absent. I also found that there were complete anæsthesia and analgesia below the knee. On comparison with the other leg, I found it white and cold. I felt for pulsation of the popliteal and found it absent though easily detected at the same point in left leg. Pulsation of the posterior tibial at the inner side of the ankle joint was also absent. He could rotate the leg with the hip muscles but there was absolute paralysis of the muscles of the leg. Very slight pulsation could be detected high up in the popliteal space at a point about where the femoral emerges from the opening in the adductor magnus to become the popliteal. From the fact that three hours later there was slight purplish discoloration and anæsthesia just above and to the inner side of the knee (lower third of inner side of thigh), and no pulsation then at this point. I think this might have been transmitted for a short distance through the clot. I made the diagnosis of obstruction of the popliteal artery, probably embolism, and advised massage over the popliteal artery with use of hot packs in the hope of softening and breaking up the clot, a vain hope, as Dr. Ward says in his paper, "The writer cannot find that success has ever attended such effort."

I at once sought the friend of the patient and impressing upon him the seriousness of the condition asked for consultation. Shortly after three o'clock Dr. Gordinier saw the case with me, and corroborated my diagnosis, and together we called in Dr. Ferguson as to the advisability of high amputation. The condition of the leg was as described above, except for slight purplish discoloration for a hand's breadth below the knee, about the knee joint, and over the lower third of the thigh at its inner aspect. Dr. Ferguson called attention to the fact that the clot probably did not extend up as high as the profunda femoralis, for the tissues supplied by that vessel still retained their natural heat and color. This artery, it will be remembered, supplies, practically, all the tissues of the thighs, except the sartorius and vastus internus muscles and the integument over the lower third of the inner aspect of the thigh and the branches through the knee joint; these are supplied by the muscular branches of the superior femoral and the anastomotica magna, the latter being given off from the femoral just before it passes through the tendons, opening in the adductor magnus. The latter arteries, or at least the last-named, were undoubtedly involved as indicated by the discoloration, loss of natural heat and anæsthesia for an area the size of a hand above the inner aspect of the knee. The profunda femoralis is given off from one to two inches below Poupart's ligament. So the upper limit of the clot at that time was somewhere between these two points. Pulsation of the femoral at the groin could be plainly felt. We agreed that an amputation at that time through the upper third of the thigh or hip joint offered no hope of recovery; we also gave an unfavorable prognosis.

A specimen of blood, examined by Dr. Smith, showed a marked increase in the number of white cells, and hæmoglobin, 72 per cent.

At the suggestion of Dr. Gordinier sixteen grains of ammonium carbonate in liquor ammonii acetatis were given every two hours, with five grains of ammonium iodide every four hours. Both were well retained by the patient, and there seemed to be no extension of the clot up to the time of death, about thirty-six hours later; the leg was wrapped in cotton and external heat applied.

At *8 P. M.:* the temperature was 101.3 degrees; pulse, 90; respiration, 40. Toward morning of the tenth day the temperature, pulse and respiration began to rise; at *2 A. M.,* temperature 103 degrees; pulse, 120; respiration, 38; restless, voids urine, and bowels move involuntarily. At *8 A. M.,* temperature, 104; pulse, 120; respiration, 48, shallow. Sponge baths had little effect on the temperature; the pulse was weak and dicrotic at *3 P. M.,* temperature, 104.2; pulse, 130; respiration, 58; great difficulty in swallowing, semi-conscious.

In spite of stimulation, the temperature continued to rise, pulse and respiration became more rapid until *8 P. M.* When the temperature was last taken it was 106 degrees, and at 9:40 o'clock he died.

The *diagnosis* of arterial obstruction in this case was based upon the following symptoms: (1) absence of pulsation over popliteal and posterior tibial arteries; (2) paleness and coldness of the leg; (3) anæsthesia and analgesia of the leg; (4) loss of patellar and plantar reflexes; (5) purplish discoloration; (6) paralysis of muscles of the leg,—a group of symptoms, which, taken together, could belong to no other condition.

Now, as to the nature of the obstruction, the diagnosis of embolism at the bifurcation of the popliteal was based upon the following facts:

(1) The sudden onset of the pain in the region of the knee; (2) sudden onset of anæsthesia and analgesia and paralysis of leg; (3) absence of atheroma or other indication of arterial disease favorable to formation of thrombus; (4) because the bifurcation of the popliteal is the favorite site of embolism of the leg.

In conclusion two questions present themselves: the possible origin of the embolus, and the probable cause of death. In the absence of *post-mortem* examinations, these must remain open questions. The embolus, to have been large enough to plug the artery at this point, must have either had its origin from the heart itself, or possibly in one of the largest pulmonary veins. It is hard to conceive of this latter condition, for it could only be a portion of a thrombus formed within one of the smaller veins by extension of the pneumonic process, causing roughening of the inner coat, and then the clot extending until it reached one of the very largest pulmonary veins, then being swept off and carried through the heart into the general circulation.

Now in the absence of physical signs of valvular disease of the heart, what conditions could we have within the heart itself that could produce the embolus?

We might have acute endocarditis, which various authorities mention as one of the complications of pneumonia, which had produced no real incompetency of the valve, but masses of fibrin, deposited on the irregularities of the valve, forming the nucleus of a clot of considerable size, might have been swept off into the general circulation. Or we might have had an acute ulcerative or malignant endocarditis, of which Strümpell says "examination of the heart may furnish evident signs, but as we have said not invariably." Had this been the case, we might have had multiple infected emboli lodged in the various organs of the body. Of this condition Strümpell goes on to say that even the "fever is of diagnostic value only when it is decidedly intermittent." Thus we could have had acute ulcerative endocarditis without characteristic physical signs, and the lodgment of multiple infected emboli without characteristic intermittent fever. This would account for the rapid fatal termination and the high temperature before death. *Lastly,* the embolus might have had its origin from an ante-mortem clot within the heart. On this point I will quote from Dr. Ward's paper as follows:

"M. Dumez puts the argument concerning the point of origin of the clot very clearly, though he was not the originator of it. Considering the pressure of the blood in the arteries (amounting to about six feet of water) and the rapidity of the circulation (blood passing from the pulmonary radicles to the extremities in four or five seconds), it is almost impossible to conceive that a clot could form on the healthy walls of an artery having no inflamed or roughened surface to which to attach itself; it must be washed along in the blood current. It seems more probable that the clot forms and grows in the heart, where," and here he quotes Mons. Dumez, "everything is favorable for the production of a fibrinous clot, the chordæ tendineæ, the columnæ carneæ, the play of the valves, the anfractuosities, the irregularity of the contractions, their lack of strength in puerperal conditons, typhoid fever, goitre, and other diseases" (why not pneumonia?). Dr. Ward then adds, "He supposes then that a clot forming in a little eddy, or in a fossa between two columnæ carneæ, grows until, by its increased size, it projects into the cavity of the heart far enough to be detached from its moorings, or a part of it broken off by the current and carried into the circulation."

This theory of *ante-mortem* heart clot, which even in those days was not a new one, has many supporters. Strümpell, in his *Practice of Medicine,* in speaking of the complications of typhoid, says: "In severe cases which end in death, cardiac thrombi are sometimes found, with emboli in the lungs, spleen, kidneys and other organs."

Had this been the origin of the embolus, death might have been due to lodgment of emboli in some of the above mentioned organs, or to simple extension of the pneumonic process posteriorly, for though no changes were observed in the physical signs of the front of the chest, the back of the chest was not examined for the last day or two, owing to the patient's weak condition.

These, as I have said, are only theories, and I have offered them with the hope that they may prove of interest and furnish food for thought.

Clinical and Pathological Notes

Splenic Abscess Following Typhoid Fever. By J. F. McGarrahan, M. D. *Cohoes Hospital Service.*

Abscess of the spleen following typhoid fever is seemingly a rare condition, as after a search through most of our best-known American medical journals, covering a period of five years, no mention of it was found. Stengel, in *Twentieth Century Practice*, says: "In cases of infectious diseases like typhoid, malaria and relapsing fevers, the micro-organisms may be present in the spleen, with no other result than the development of acute splenic tumor, until some traumatism, perhaps trivial, has initiated a more active inflammatory process and suppuration." Strümpell states: "Infarctions may occur in typhoid," and under spontaneous septico-pyæmia, he mentions abscess of the spleen, saying it is almost impossible to diagnose this condition. Lockwood, in Loomis-Thompson *Practice of Medicine*, claims that the diagnosis cannot be made with certainty in a majority of cases. The condition should be suspected, if the spleen becomes enlarged during the course of pyæmia, or maglinant endocarditis, or if a remittent temperature complicates typhoid without other evident cause. Constant and increasing pain and tenderness over the spleen, progressive enlargement of that organ, failure in health and a continued irregular fever are most marked diagnostic symptoms. Regarding the prognosis, he says it is seldom required in actual practice, as the condition is so rarely detected before death. Bartholow states that cases of splenitis ending in recovery are never recognized. DaCosta writes: "Inflammation is very difficult to recognize; symptoms are, pain in the left hypochondrium, radiating in various directions as far as the left shoulder. If the serous coat is involved pain is augmented by pressure, by coughing and by deep inspiration. Sometimes there is delirium, dry cough and a sense of suffocation. The area of dullness increased, and this enlargement of area of dullness is a most important element in diagnosis. The disease is rarely primary, usually due to metastasis. Osler makes no mention of abscess in connection with splenic disturbance during typhoid. The diagnosis is apt to be confounded with pleuritic effusion, more than any other condition. Cancer of the stomach, abscess of left kidney, or pancreas are other conditions to be remembered. Page, in his *Physical Diagnosis,* gives the following: "According to Niemeyer, the normal dullness of spleen is from the upper margin of the eleventh rib along the axillary line, to the ninth rib, anteriorly to a line drawn from anterior end of eleventh rib, to the nipple, but posteriorly it cannot be defined from dullness of the left kndney. Its greatest thickness from before back is about two inches. The spleen usually enlarges downward and forward, and then may be felt below the ribs in the abdominal cavity." But, according to Niemeyer, and others, "it may extend upward, rarely higher than the fifth rib, without going below the margin of the ribs at all, even in cases of decided enlargement. The heart is pushed upward and not sideways, the latter being usually the case in pleuritic effusions of large size. The enlarged spleen moves up and down perceptibly during respiration, the level of dullness changing an inch sometimes on respiratory percussion, accordingly as percussion occurs, at the end of full inspiration or expiration. The area of dullness is less when patient lies on his right side in enlarged spleen, but it does not change otherwise with position of patient, as is often (not always) the case in pleuritic effusion. In enlarged spleen the respiratory sounds are feeble over the part, but, according to DaCosta, the vocal vibrations are mostly unimpaired, whereas, they are usually absent in pleuritic effusion. The rational signs of the case, and the previous history with reference to pleurisy, intermittent fever and the like, will aid in arriving at a diagnosis. Extensive plastic pleurisy without effusion would, among other points of difference, cause no bulging of the chest walls, like enlarged spleen, and might even cause contraction. The hypodermic syringe may be used to test pressure or absence of fluid in pleural cavity." Regarding this last statement, it will be seen that this cannot always be relied upon as a positive poof of the location of pus.

One case is as follows: Benjamin S., Italian, aged 30, brickmaker by occupaton, entered the Cohoes Hospital March 17, 1901. Health had been good up to present illness. Gave history of injury to ribs two months before. Complained of general weakness, loss of appetite, with gradual increase in body heat, for several weeks. Temperature 102°, pulse 96, morning of admission. The fever pursued a rather severe course, the temperature at times taking great bounds, reaching 104 $\frac{4}{5}$° four times in the first three weeks, dropping to normal on the forty-first day. Patient's general condition at this time seemed as good as could be expected. He had complained of some pain in left side for a few days before his fever left. He said it no longer gave trouble, and he was allowed solid food and also to sit up. After several days, on soft-boiled eggs, milk toast and strained oatmeal, his temperature began to rise and pain in his side returned. Ten days after the beginning of the relapse his temperature reached 103 $\frac{3}{5}$°. May 9th the pain in his side became very severe, so as to interfere with respiration. Respiratory movements caused increase of pain, which radiated from left hypochondrium to nipple. This was diagnosed as pleuritis, and a blister was applied, which seemed to give some relief. Slight repeated chills occurred, which were treated with quinine. On May 12th a very severe chill occurred, and the temperature at that time was 104$\frac{2}{5}$°, pulse 132. The fever began to decline shortly afterwards, and in twelve hours, in spite of external heat and stimulants, had reached 95°, or lower, as the thermometer could not register less. The pulse and heat sounds were almost imperceptible. The temperature remained subnormal for twenty hours, and then reached 98 $\frac{1}{5}$°, and varied between 98° and 101° for the next three days, and on the evening of May 16th went down to 95° again, rising during the next day to 99 $\frac{2}{5}$°. Then followed an irregular temperature curve, indicating septic infection and pus. The case remained under medical treatment until May 20th, when I was asked to see the patient. The spleen was found to be enlarged and tender, though not easily palpated. The greatest tenderness was over the tenth intercostal space, in the posterior axillary line, and the area of dullness extended posteriorly as high as the upper border of the eighth rib. The examination of the left lung was unsatisfactory, but it did not show signs of ordinary pleuritic effusion. Respiratory sounds were feeble, but present over part of the area of dullness posteriorly. The urine was normal. The probable diagnosis was splenitis with septicæmia, but, as I had never seen a case, I did not feel positive. The patient was again seen one week later; an aspirating needle was used, but no pus was obtained. The hypodermic needle, however, did reach pus at the eighth intercostal space, and this, with dullness to upper border of the eighth rib, seemed to indicate empyema. Upon examining chest and noting dullness and point where pus was found, concluded it must have been a pleurisy which caused the trouble, as typhoid pleurisies are said to result usually in empyema. The case was turned over to me for operation, and on May 29th, assisted by Drs. Archambault and Peltier, I resected two inches of the eighth rib and then incised the pleura. The pleura cavity was empty. The diaphragm arched highly and its movements were exaggerated, which probably accounted for failure to reach pus on the first aspiration, which might have been made during inspiration. A firm mass could be felt moving with and seemingly adherent to the diaphragm. To make room, a piece of the ninth rib was resected and at a point over the mass, which offered least resistance, an aspirating needle was passed and pus found. A small opening was made and a closed forceps was introduced and then opened and withdrawn. About six ounces of thick pus escaped. The cavity was then washed out and packed with iodoform gauze. The shock following operation was severe, but under subcutaneous use of normal saline solution, and stimulation, the patient rallied. The condition of the patient did not improve at any time after the operation. He sank into a low delirious state and remained so until his death on June 22, twenty-four days after operation. The post-mortem examination was made the same night. The pleural cavity was bathed with pus. The hole in the diaphragm communicated with an abscess cavity in the spleen. Diaphragm adherent for about 2½ inches in diameter. Cavity in spleen had contracted to about the size of a half-dollar and was lined with a thick pyogenic membrane of a grayish color. The spleen was much enlarged and in general of a very dark red color. No other points of suppuration were found. The kidneys were enlarged and pale in color, and the heart was pale and soft. The liver was lighter than normal in color. The stomach and intestines appeared normal. Peyer's patches not examined. After operation some of the contents of the abscess cavity was sent to Dr. Blumer at the Bender Laboratory, who reported streptococcus present, also polynuclears and broken-down tissue.

In conclusion, it would seem that a patient's only chance with this condition rests upon early diagnosis, and prompt surgical interference.

Editorial

As Goldsmith had now acquired popularity and an extensive acquaintance, he attempted, with the advice of his friends, to procure a more regular and ample support by resuming the medical profession. He accordingly launched himself upon the town in style; hired a man-servant; replenished his wardrobe at considerable expense, and appeared in a professional wig and cane, purple silk small-clothes, and a scarlet roquelaure buttoned to the chin: a fantastic garb, as we should think at the present day, but not unsuited to the fashion of the times.

With his sturdy little person thus arrayed in the unusual magnificence of purple and fine linen, and his scarlet roquelaure flaunting from his shoulders, he used to strut into the apartments of his patients, swaying his three-cornered hat in one hand and his medical sceptre, the cane, in the other, and assuming an air of gravity and importance suited to the solemnity of his wig; at least, such is the picture given of him by the waiting gentlewoman who let him into the chamber of one of his lady-patients.

He soon, however, grew tired and impatient of the duties and restraints of his profession; his practice was chiefly among his friends, and the fees were not sufficient for his maintenance; he was disgusted with attendance on sick-chambers and capricious patients, and looked back with longing to his tavern-haunts and broad convivial meetings, from which the dignity and duties of medical calling restrained him. At length, on prescribing to a lady of his acquaintance, who, to use a hackneyed phrase, "rejoiced" in the aristocratic name of Sidebotham, a warm dispute arose between him and the apothecary as to the quantity of medicine to be administered. The Doctor stood up for the rights and dignities of his profession and resented the interference of the compounder of drugs. His rights and dignities, however, were disregarded; his wig and cane and scarlet roquelaure were of no avail; Mrs. Sidebotham sided with the hero of the pestle and mortar; and Goldsmith flung out of the house in a passion. "I am determined henceforth," said he to Topham Beauclerc, "to leave off prescribing for friends." "Do so, my dear Doctor," was the reply; "whenever you undertake to kill, let it be only your enemies."

This was the end of Goldsmith's medical career.

WASHINGTON IRVING.

Oliver Goldsmith. A Biography.

The Efficiency of Vaccination in Preventing Small-pox The following statements are made in the report of the Superior Board of Health of Porto Rico, Major J. Van R. Hoff (A. M. C., 1871), Surgeon, U. S. A., chairman, period 1898-1900: The average number of deaths from small-pox for the past ten years was 621; the greatest number, 2,362, occurring in 1890, and the least, 11, in 1893. In 1899 there were about 50 per cent. less deaths than in any of the three years preceding. This decrease was due to the general vaccination of the island, which was concluded June 30 of that year; 860,000 vaccinations were performed under the direction of the chief surgeon of the department during the four months preceding this date. All the deaths reported in 1899 from small-pox, except one, occurred prior to the day on which the work was concluded. At the rate of 242 for the first six months the annual deaths would have been practically the same as in the preceding three years. During the seven months covered by these statistics but one death has occurred from this cause.

It is stated by Major Hoff that subsequent to the completion of the general vaccination of the Porto Rican population on June 30, 1899, there have occurred, down to the present time, but three deaths from small-pox in Porto Rico—the average annual death rate from this disease being reduced from 621 to less than 1.5, with an apparent saving of 1,239 lives since the date mentioned. No epidemics of variola have occurred since that time in Porto Rico. A slight outbreak or varioloid occurred in the city of Ponce, but it was attended with no deaths and quickly subsided.

Although there were over 860,000 vaccinations performed on a susceptible and generally unvaccinated Porto Rican population, only one death occurred which could be attributed to vaccination. This was due to tetanus, and occurred in a child. Tetanus is, however, an extremely common and fatal disease in Porto Rico, causing no less than 818 deaths on the island during the seven months, October 1st to May 1st, 1899-1900, or 3.41 per cent. of the total mortality. The occurrence of the case of tetanus following vaccination was undoubtedly due to a secondary infection from an outside source with the widely-distributed tetanus germ.

A second instance illustrating the efficiency of vaccination is given in the report of the Surgeon General of the Army for 1899, page 245, where a brief description is given of the stamping out of an epidemic of small-pox in the district of Holguin, Cuba. In this epidemic, 1,185 cases of small-pox were collected into isolation hospitals by the army surgeons in charge. General vaccination of the Cuban population was practiced and the epidemic was promptly brought under control. It is of interest to note that not a single case of small-pox occurred in the carefully vaccinated regiment of the United States troops which furnished the guards for the lazarettos, performed the work of disinfection of infected buildings and in other ways were constantly exposed to the danger of contracting small-pox.

Scientific Review

Recurrent Vomiting in Children

The existence of a disorder peculiar to young children characterized by a sudden onset of persistent vomiting without any gastro-intestinal symptoms is admitted by pediatrists in this and other countries. Leyden was probably the first to describe this disease which he termed periodical vomiting. He was shortly followed by Gee, who published a report of nine cases of "fitful or recurrent vomiting" in the St. Bartholomew's Hospital Reports of 1882. Since then much has been written and to-day this affection receives full attention in the latest works on Children's Diseases.

Numerous theories as to its causation have been advanced. Holt and Rachford incline to the uric acid hypothesis and Comby also believes that this form of vomiting is an effect of a uric acid diathesis. Comby believes that this diathesis affects all parts of the human organism.

In the nervous system it produces paroxysmal cephalalgias, night terrors, etc.; in the urinary tract it is responsible for hæmaturia, vesical spasm, incontinence, etc.; and periodic or cyclical vomiting is a manifestation of the diathesis on the part of the intestinal tract. Holt had the ratio between uric acid and urea carefully studied in one of his cases and found that there was a marked diminution in the amount of uric acid excreted during the attack. Griffith found the same condition was present in two of his cases, but states that his observations were not conclusive. Marfan is the latest contributor on this subject and he believes that the vomiting is toxic in origin. He lays great stress on the presence of acetone in the urine and in the vomited material. He detected the odor of acetone in the first material vomited in several of his cases. This is a most valuable observation, as it shows that the production of acetone is affected before the vomiting occurs and is a strong argument for the toxic theory. The acetone in itself has slight significance, but it is always the companion of true pathological toxins. According to Marfan, persistent vomiting and excretion of acetone form the chief symptoms of a disorder which he believes is identical with cases previously described as periodic vomiting. Griffith, in two of his cases, noticed that the breath had a peculiar odor and that both indican and acetone were present in the urine. He believes that this gives proof of the existence of a toxæmia and concludes that recurrent vomiting is a neurosis of toxic origin connected in some way with faulty metabolism.

Valagussa, in a report of four cases of this disorder, found acetone in three of the cases and made no mention of a urinary examination in the fourth case. He is a believer in the autointoxication theory. Further and more scientific work must be done before one can state definitely the rôle played by acetone in this disorder. Acetone is frequently noticed in the breath after chloroform narcosis and Marfan suggests that there may be some similarity in the pathogenesis of vomiting after chloroform anæsthesia and that of recurrent vomiting.

There is an unanimity of opinion as to the influence of heredity in the etiology. A neurotic or gouty tendency inherited from one or both parents is acknowledged by nearly all the writers to be the chief predisposing cause. In the majority of the reported cases the general health of the children has been excellent. Exposure to cold, fright, excitement and exhaustion have been mentioned as exciting causes. Errors in diet seem to have little etiologic import. Marfan has seen this affection occur at the same time in the same family.

Griffith claims that in the majority of cases the first attack occurs within the first three years of life. Marfan's twenty-five cases occurred between the ages of one and ten years, so it would appear that this disorder is essentially one of early childhood. Holt is the only writer who mentions the influence of sex, and he believes the disorder is more frequent in girls.

Prodromal symptoms are not always present. Marfan says that a feeling of lassitude or a slight headache may precede the attack by a few hours.

In one of Griffith's cases prodromes lasted a week, but this is unusual. The first thing noticed is the vomiting. This is the most striking and characteristic symptom. It may be mild and last only a few hours, or very severe, lasting several days. It is accompanied by nausea and frequent unproductive retching.

This continues to the end of the disease. The contents of the stomach are first ejected and later a colorless viscid liquid which is at times tinged with bile. The reaction is generally acid, but may contain no free hydrochloric acid. Snow found an excess of hydrochloric acid in his case. The reaction was acid in Valagussa's cases. Pepper states that the acidity of the vomit has no constant characteristics. In Holt's cases the reaction was strongly acid. Griffith makes no mention of the reaction in his cases.

The condition of the urine has received careful attention. Holt, Pepper, Griffith, Valagussa and Comby found an excess of uric acid in the urine. Marfan emphasizes the presence of acetone, which he found in every case. Acetone was detected in two out of four of Griffith's cases and in three out of four of Valagussa's cases. Indican is also frequently found in these cases. Albumin and casts were found in one of Rachford's, Comby's and Griffith's cases. Rotch and several other observers make no mention of the condition of the urine.

Snow is the only writer who has described convulsions in these attacks. Abdominal pain is spoken of by Pepper, but the majority of clinicians consider it to be entirely absent in typical cases, and this forms an important diagnostic point. Marfan always found the abdomen retracted, but in Rachford's cases it was distended. This retraction was mentioned by some of the earlier writers and it was present in two of Griffith's cases.

Thrist is a prominent symptom and is usually intense. A peculiarity is that a small swallow of water will immediately produce vomiting.

Constipation seems to be the rule but it is not a necessary symptom. One of Valagussa's cases suffered for months from alternating diarrhœa and constipation, but the attacks of vomiting were always preceded by constipation. Holt and Griffith both mention the frequent appearance of clay colored stools after the attack. The temperature is only slightly elevated, if at all. In Snow's case the temperature rose as high as 105°F. Rotch found the temperature normal or even subnormal. Marfan says that it is always in the neighborhood of normal. Pepper states the temperature may rise just before the attack, and a rapid elevation during the attack may or may not occur.

The disease lasts from a few hours to seven or eight days. Marfan's longest case continued for fourteen days and his shortest three days. The duration of Griffith's case was from two to ten days. The recovery is always rapid, almost instantaneous, in fact. When the vomiting ceases the appetite returns and all symptoms disappear. When the disease has lasted four or five days there is generally much prostration and emaciation. Even in these cases the convalescence is surprisingly rapid. Marfan observed catarrhal icterus as a sequel in one of his cases.

As the name applies, this disorder is apt to recur. There is, however, no definite regularity in the recurrence. Marfan says that while relapses are apt to occur, yet this is not the rule and he has had several cases where, after more than eight years, there has been no return of the attacks. In Holt's case there was an interval between the attacks of five to six months. Rachford had an interval of from four to eight weeks, while the intervals in Snow's case were from six to twenty-five weeks. Griffith could find no regularity in his cases. It would seem then that the frequency of the occurrence of the attacks is subject to great variations and that there is no regularity in the return of the attacks. Whitney's case is the only one showing a tendency to distinct periodicity. Disposition to recur appears to diminish as the child grows older.

The complete absence of digestive troubles and of objective symptoms on the part of the stomach and intestines; the sudden onset with rapid recovery; and the failure of relief of nausea after the attacks of vomiting, all tend to show that there is no disease or lesion in the alimentary tract.

Acute indigestion, intestinal obstruction and tubercular meningitis may be mistaken for this disorder, but a careful examination of the patient and of the history should make the diagnosis clear.

The prognosis is very favorable and the two fatal cases reported by Griffith are about the only ones on record. The treatment is unsatisfactory as the disease when started cannot be checked. An early purgative may be of service if it can be retained. The indications are to give the stomach perfect rest and to get the bowels to act. When the child can retain some nourishment it is well to give small amounts at frequent intervals.

A teaspoonful of malted milk, liquid peptonoids, chicken or barley jelly every twenty minutes will be tolerated by the stomach and the child can soon be given a full diet.

Morphine given hypodermatically or choral administered per rectum is of value. Marfan found that injections of normal salt solution twice a day gave him the best results.

The treatment between the attacks is that of prophylaxis. All sources of reflex irritation should be removed and all forms of excitement and over study must be carefully avoided. Plenty of fresh air with avoidance of exciting and boisterous sports is to be commended.

A simple diet without much meat and with plenty of farinaceous foods, milk and eggs is desirable. The bowels should move each day and special care should be taken to guard against constipation.

HENRY LARNED KEITH SHAW.

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In Memoriam

ABIJAH THURSTIN HUDSON, M. D.

Dr. A. T. Hudson, one of the oldest medical practitioners in California, died at his home in Stockton, February 5, 1902, aged eighty-two years. He had been in poor health, and death from a general breaking down was looked for any time. Prior to his last illness his health had been of the best.

Dr. Hudson was born at Oxford, Mass., May 1, 1819, and graduated from the Albany Medical College in 1847.

He was practicing his profession as a physician in the State of Iowa when the Civil War broke out, and took a deep interest in the organization of Iowa volunteers during 1861 and 1862. When the disastrous second battle of Bull Run was followed by the advance of Lee's army into Pennsylvania he offered his services and was commissioned as Surgeon of the 26th Iowa Volunteer Infantry, with Rank from September 3, 1862, remaining in service until he was honorably mustered out at Washington, D. C., June 6, 1865. He served with his regiment in Thayer's 3d Brigade, Steel's 1st Division, McPherson's 15th Army Corps, Army of the Tennessee, and participated in the attack on Haines' Bluff near Vicksburg, December 28, 1862; Arkansas Post, January 11, 1863; Siege of Vicksburg, May 17 to July 4, 1863; Lookout Mountain, Missionary Ridge and Ringgold, November 24 to 27, 1863; and the battles of Resaca, Dallas, Kenesaw Mountain and siege and battle of Atlanta, May to September, 1864. He was with Sherman on the "march to the sea," and in the battle of Bentonville, North Carolina, March 21, 1865, besides participating in numerous small engagements and skirmishes.

Soon after the close of the war Dr. Hudson removed to California, and settled in Stockton in 1867, where he has ever since resided, practicing his profession almost up to the day of his death.

He was elected to the State Senate for two terms and for years took a prominent part in politics. On May 1, 1901, the San Joaquin Medical Society gave Dr. Hudson a banquet in honor of his eighty-second birthday.

The surviving relatives are Judge S. A. Hudson, of Fargo, Dakota; Dr. A. S. Hudson, of Mt. Vernon, Ohio, a twin brother of the deceased, who graduated from the Albany Medical College in 1846; a son, Harry H. Hudson, and a niece, Miss Mary Park.

Dr. Hudson was recognized as a master of his profession, and was very highly esteemed by the community in which he lived, as professional man, as citizen and as friend.

DANIEL SCHUYLER YOUNG, M. D.

Dr. Daniel Schuyler Young, one of the most prominent surgeons of Cincinnati, Ohio, died at the City Hospital in that city, February 20, 1902, after a prolonged illness.

Dr. Young was born June 25, 1827, in the town of Florida, Montgomery County, N. Y. Until he was twenty-one years of age he lived upon a farm, the deed of which was given before the Revolutionary War to his great-grandfather, who cleared and cut the land, which is still a family possession. Upon leaving the old farm Dr. Young went to Albany to accept a clerkship in a general store and while there he became imbued with the idea of studying medicine.

Dr. Young entered the Albany Medical College, from which he graduated in 1855, and afterward located in Cincinnati. Though a general practitioner, he was especially fond of surgery, and in this respect he presented rare ability, originality and operative skill of the highest order. He was on the City Hospital medical staff for seventeen years, and his original fracture boxes and dressings won him more than local fame. As a clinical lecturer he had few equals, and this, coupled with his superior knowledge, caused him to be retained as a consultant physician at the hospital up to the hour of his death.

When the Civil War broke out Dr. Young was one of the first to respond to the country's call. Of the five hundred surgeons who presented themselves for examination, he was one of a number less than twenty who were accepted. Dr. Young served through the war with distinction. He was under Generals Thomas and Rosecrans, and was with Sherman on his famous march to the sea. In the winter of 1863 he returned to New York on a furlough and married Miss Carrie A. Hawley, a young woman of high culture and rare attainments, and they took up their home permanently in Cincinnati.

With the aid of his wife, Dr. Young began a work for publication on surgery. The illustrations, more than 500 in number, were drawn by himself direct from specimens in the tent at night upon the battle field. However, he was doomed to disappointment. Before the work went to press the Government had published a voluminous work on surgery, and this left Dr. Young's treatise unnecessary.

Shortly after his marriage and about the time the war closed, Mrs. Young died, and the bereaved husband never again formed a matrimonial alliance. He actively entered into the practice of his profession.

Dr. Young's ability was not alone confined to the practice of medicine and surgery. As an etcher he had few equals in this country. About fifteen years ago an exhibition of etchings was given at the Academy of Fine Arts, in Berlin. At the time invitations were sent to the United States for specimens, and Dr. Young was one of those who responded. When the work was finally catalogued in New York, preparatory to sending it to Berlin, Dr. Young was surprised to find that his work was the first on the list. After the exhibition was over, the Berlin authorities wrote to Dr. Young, asking him to donate his specimens to the Academy, and, as the request was granted, ever since he has yearly received letters of commendation, along with the catalogues which are printed annually. Dr. Young was also something of a violin manufacturer. He was an apt student of acoustics, and what few instruments he made were constructed upon acoustic principles such as made the old Cremona fiddles famous. He counted Prof. Schrodick, of the College of Music, who was formerly the head of the violin department at Leipsic, as one of his nearest friends. The professor frequently called at his office while the doctor was working, and played on his instruments, pronouncing them noble of tone and quality and of an Italian character. Dr. Young was a charter member of the Academy of Medicine, and also a charter member of the Cuvier Club. He was also a botanist of more than ordinary ability, a geologist and the best posted man in the State of Ohio on the fish of the Ohio River.

At the funeral services of Dr. Young, the following remarks were made by Dr. J. C. Oliver:

I esteem it a privilege to express my appreciation of Dr. D. S. Young. Both as a man and as a physician he possessed many admirable traits, while at the same time he was lacking in many of those characteristics which go to make a man popular with the mass of humanity. He did not seek popularity, but was at all times highly sensitive to criticism. One might almost say that his sensitiveness was his greatest fault, because it was this quality which induced him to withdraw more and more from the society of his fellows Under an external and apparent indifference to the opinions of others was hidden a soul that was hypersensitive to the slights and indifference of the world. This sensitiveness of his fibre frequently led him to imagine slights which were never intended, or even dreamed of. He became thus suspicious of most men, and rarely made a confidant of any person. Such seclusion and isolation naturally led to his becoming more or less misanthropic, and made it extremely difficult for any one to break through his reserve.

To the mass of mankind he therefore became known as a pessimist and a man devoid of sentiment and affection. The world is apt to judge a man by externals and not to seek for the hidden or covered beauties of character.

It was my high privilege to have penetrated this veneer of artificiality and to have come into close contact with the soul of the man which lay beneath an apparently repellent exterior. Closer observation showed that much of his brusqueness was an unconscious effort on his part to protect an unusually kind heart. His apparent barrier to approach was but a warning to keep people from treading upon the unknown feelings which lay behind. I say these things, not in extenuation of the method nor as commending the plan, but simply because they are true. A different course might perhaps have made him more popular, but the fact remains that he preferred seclusion to popularity, and reflection to the admiration of the masses. He chose his course and was consistent to his ideals—who shall say aught against it!

One of Dr. Young's most marked characteristics was his honesty. This honesty was that old-fashioned variety which believed in honesty as a very part of a man's composition, and actually believed that it should be a guide to the direction of one's life. No one ever doubted his honesty of purpose. In his investigation of a subject this self-same honesty impelled him to study the subject from all sides and only to make up his mind from the preponderance of the evidence.

I cannot speak of his service to his country because I have no personal knowledge of this period of his life. Others can speak of this phase in words more eloquent and from facts of personal observation. I know that he was loyal to his country, conscientious in the discharge of his duties, and successful with the patriots who suffered and bled for their ideas of right and duty.

It is, however, of his work as a physician that I can speak from fuller knowledge. He was a surgeon to the Cincinnati Hospital when I was an interne in that institution. As his assistant, I came to know and appreciate many of his ideas of surgery. It was here that one could get an inkling of his tender-heartedness. He was fond of saying that "good surgery never hurts," and it was his cardinal rule never to inflict unnecessary pain upon a patient. Many will, no doubt, remember his instructions in regard to handling a fractured member—how he inveighed against the necessity for eliciting crepitus because the manipulation caused pain. Many can also recall his great kindness to the outcast and wretched of creation—the victims of vice and vicious lives. We can recall his careful attentions to those who ordinarily were shunned because of the nature of their troubles. These all suggested the existence of a love for even the lowest of humanity.

Much can be said of his surgical ability. His ideas were original and were often carried out in a highly original manner. His treatment of fractures was more scientific and logical than that of most men of any community. He reflected upon the nature of the lesion and strove to adapt his measures of treatment to the actual conditions present. During my service with Dr. Young he was experimenting with alcohol as a dressing for wounds. His results were suggestive of those obtainable at the present day. He was groping after improvement, and came near anticipating some of the glories of Lister.

As an operator he was conservative and careful. Like every other wise surgeon, he knew that his first and highest duty was to his patient, and therefore he confined his operative measures to those which were necessary and safe. He much preferred safety to brilliancy. As a lecturer he was helpful and very suggestive. Many a student of bygone years carries within his memory many ideas implanted by Dr. Young. He made the students think more by means of suggestion than by elaboration of his theme. He was not a fluent talker nor an eloquent speaker, but he carried conviction, nevertheless.

It was chiefly in the later years of his life, after he retired from active duty at the hospital, that I acquired a more intimate acquaintance with Dr. Young. I had the honor to attend him in two illnesses—his last one and one a few months previously. During the previous illness he was moved to tears by the kindness of the authorities of the hospital in refusing to accept any remuneration for their care and attention to him. He clearly showed his appreciation by many remarks concerning it. His final illness was the result of an old hypertrophied prostate, which induced secondary changes in his kidneys and led to his demise through the means of uremic poisoning. He knew that the end was imminent and refused to take stimulants of any sort, because he said there was no use of postponing the inevitable. He said he was ready to go, and only asked to be allowed to go painlessly and quietly. He faced death courageously and without regret—nay! rather he embraced it as a kind deliverer and a welcome surcease from care and discomfort.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, FEBRUARY, 1902

Deaths

	1902	1901		1902	1901
Consumption	16	14	Seventy years and over	26	24
Typhoid fever	3	3	One year and under	12	29
Scarlet fever	0	0	Albany City Hospital	12	29
Diphtheria	1	4	St. Peter's Hospital	6	5
Other contagious diseases	2	4	Homeopathic Hospital	4	1
Penumonia	14	21	County House	4	3
Broncho-Pneumonia	6	6	Penitentiary	0	2
Apoplexy	11	9	Little Sisters of the Poor	1	1
Bright's disease	11	13	Albany Orphan Asylum	1	0
Cancer	8	7	Public Places	2	2
Accidents and violence	6	13	Sacred Heart Convent	2	0
Total number of deaths					**148**

Deaths, less non-residents, being in institutions	**137**
Death rate for February, 1902	**15.12**
Death rate, less non-residents	**14.00**
Total number of deaths February 1901	**157**
Death rate February 1901	**18.37**

Births.................... ....80 *Marriages*.................. 39

In order that the Department might feel sure that all deaths were properly certified by the Department, an investigation has been made during the month and seems to be conclusive that the death rate, given above, is the actual death rate of the city. This is rather a remarkable showing, and is accomplished in part by the thoroughness of the fumigation and the practical control of contagious disease by the Department.

WORK OF THE HEALTH PHYSICIANS

Total number of new assignments to health physicians	90
Total number of calls made	390

INSPECTIONS

During the month there were ninety-four meat markets inspected, nineteen milk peddlers' wagons inspected, and a number of fish markets, slaughter-houses, cow-stables and milk-rooms inspected. About one hundred and eighty-three inspections of old and new buildings for plumbing were made, and a large number of plumbing inspections of new iron drains, cesspools, sinks, butlers' pantry sinks, and other plumbing details. Plans were passed on for ten old and five new bulidings. The usual number of nuisances were investigated and inspected, and most of them abated.

BENDER LABORATORY REPORT ON DIPHTHERIA TESTS

Initial positive	Initial negative	Release positive	Release negative
20	61	15	25

Failed .... 6 Total 127

CONTAGIOUS DISEASES REPORTED

	1902	1901		1902	1901
Typhoid fever	3	7	Chickenpox	6	0
Scarlet fever	9	4	Smallpox	1	30
Diphtheria	27	75	Measles	8	3

In addition to this, a large number of cases of whooping-cough were known to exist in one of the public schools and a number of cases of mumps in another. The Department, after an investigation, took control of these cases with the result of an immediate improvement in the conditions.

Number of houses fumigated..33 Number of rooms fumigated..91

Number of days quarantined for diphtheria:

Longest........39 Shortest.......26 Average.......32

Number of days quarantined for scarlet fever:

Longest........39 Shortest.......26 Average.......32

Number of cases of diphtheria reported, 27; antitoxine used in 21. Deaths from diphtheria, one; antitoxine not used.

Public Health Administration in Havana

The reports of W. C. Gorgas, Major and Surgeon, U. S. A., Chief Sanitary Officer of Havana, Cuba, has been received for the month of January, 1902, and for the year 1901.

The influence of modern sanitary methods in diminishing the death rate and preventing the occurrence of communicable and contagious disease is again strongly emphasized. Dr. Gorgas, in his report for the month of January, 1902, says, among other things:

"Of infectious and contagious diseases, tuberculosis is the only one that plays an important part in our death rate. We had five deaths from typhoid fever, and three from diphtheria, an excellent showing for a city of the population of Havana (275,000). There has been no smallpox since July, 1900.

"The first month of the year makes a most encouraging showing as to yellow fever. The average number of deaths from this disease since 1899, for the month of January, has been 14.50, while this January there has not been a death; for the four months, October, November, December and January, for the same period, the average has been 146.49, while for the four months not a death has occurred; for the ten months beginning April 1st, for the same period, the average has been 457.18, while during the ten months only five deaths have occurred.

"Comparing conditions existing this January and last, we find that last January there was infection in every part of the city; this January Havana is wholly free from fever and has been so for the preceding four months. As no such condition has been even approximated in Havana before, we feel justified in saying that yellow fever has been eradicated from the city. We feel confident that the same measures that have freed the city from yellow fever will keep it free during the coming year.

"Believing that the disappearance of yellow fever is solely due to the war waged against the mosquito, this work is being kept up and pushed. The table on this subject shows that out of 17,000 houses inspected during the month, by the Stegomyia brigade, in only 114 were larvæ found. If a similar inspection had been made last January, larvæ would have been found in about 17,000 cases.

"Work against tuberculosis is being actively pushed. Information as to the nature and care of this disease is being generally spread among the people by lecture, printed matter, etc. 1,642 cases have been located within the city limits, their names and addresses carded and arranged for easy reference. The average number of deaths per year since 1899 has been 1,555.09; last year it was but 900.00, which points to a very hopeful outlook in this direction.

"Two santaria are to be erected, in different locations. The one for incurables is to be located in Hospital No. 1. The other will be for curable patients, located some five miles out in the country. This, no doubt, will be a great adjunct to other sanitary measures. But the principal dependence of the Department will have to be the home cure of the patients, and the constant teaching of patients and their friends the simple sanitary measures that will certainly prevent the spread of the disease to those about the patients."

The following contagious diseases were reported:

Tuberculosis, 154; typhoid fever, 15; malarial fevers, 3; measles, 31; diphtheria, 19; variola, 15; pueperal septicæmia, 6.

At the close of each of these diseases fumigation of premises was undertaken, so that the military measure for the control of contagious disease is a good deal more vigorous and thorough than is customary in the cities of the State of New York.

Forty-one hygienic talks were delivered in schools, and twelve in cigar factories, during the month.

Vigorous sanitary plumbing and food inspections are made and the regulations vigorously enforced.

From the yearly report of Dr. Gorgas, the following abstract is made:

"To make clear our claim that Havana has been purged from yellow fever during the past year, by the destruction of infected mosquitoes, I will run over, in brief, the history of Havana in regard to yellow fever during the past 100 years, and point out that yellow fever has always been endemic in Havana up to 1901; that sanitary measures, which had reduced the excessive death rate of Havana to that of healthy cities of civilized countries, had little or no effect on yellow fever; that general disinfection, as carried out for other infectious and contagious diseases, had been most extensively and faithfully tried; that yellow fever had suddenly and sharply disappeared upon the introduction of the system whose object was killing infected mosquitoes, based upon the theory that the Stegomyia mosquito is the only means of transmitting yellow fever; that from the 28th of September to February 15th, the time of making this report, there has not been a single case of yellow fever in Havana, a condition of affairs so unusual that all question of chance can be dropped from consideration.

"In the body of the report will be found a table, giving the deaths from yellow fever for the past forty-five years. It will be seen that in these years, with scarcely an exception, some deaths have occurred from yellow fever in every month of the year; that the maximum—2,058 deaths—occurred in 1857; the minimum—51 deaths—occurred in 1856; average, 751.44. For the year 1901, in which the new system was adopted, there occurred only eighteen deaths, and twelve of these eighteen deaths occurred before the new system was put in effect. It is equally well known that yellow fever existed in just the same way before the time covered by this table. We have pretty definite data, warranting the belief that it has been endemic in Havana since the English occupation in 1762.

"In 1899, the last year of the Spanish occupation, Havana had 21,252 deaths; in 1899, the first year of the American occupation, 8,153 deaths; the next year, 1900, 6,102 deaths, and 1901, 5,720 deaths, which would be a small number of deaths for cities of smaller size in any civilized country.

"For the past thirty-one years, this table shows that the maximum death rate during this period occurred in 1898, when it was 91.03; the minimum in 1885, 29.30; average, 41.55. This year we have 22.11.

"When it is remembered that in the years 1899 and 1900 there was a large migration of non-immune persons into the city of Havana, the statistics in regard to yellow fever is the more remarkable.

"Not only was the result obtained with a city full of non-immunes, with infection in all parts of it, but there were half a dozen infected towns in railroad communication with Havana. Constant intercourse was kept up, and no interference with commerce occurred. Goods of all kinds were allowed to come into the city freely. No restrictions were put upon bringing of clothing, bedding, etc., from these infected points.

"This is probably the last annual report that will be made by a United States Army Officer, as Health Officer of Havana, to his Military Superior, the Governor of the Island, so that I may be excused if I point out some of the sanitary differences between "the Then" and "the Now."

"The Army took charge of the Health Department of Havana when deaths were occurring at the rate of 21,252 per year. It gives it up with deaths occurring at the rate of 5,720 per year. It took charge with smallpox endemic for years. It gives it up with not a single case having occurred in the city for over eighteen months. It took charge with yellow fever endemic for two centuries, the relentless foe of every foreigner who came within Havana's borders, which he could not escape and from whose attack he knew that every fourth man must die. It found Havana feared as a thing unclean by all her neighbors of the United States, and quarantined against as too dangerous to touch, or even come near anything that she had touched, to the untold financial loss of both Havana and United States. It leaves, after careful study of the question of yellow fever, by its officer, undeterred by personal risk—for several of the investigators have died of the disease contracted by their work. It has established the fact that yellow fever is only transmitted by a certain species of mosquitoes, a discovery that, in its power of saving human life, is only excelled by Jenner's great discovery, and as time goes on it will stand in the same class as that great boon to mankind."

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held March 12, 1902, in Alumni Hall. The meeting was called to order at 8.50 P. M., the President, Dr. William H. Murray, in the chair. The following members were present: Drs. Blumer, Capron, Carroll, Cook, Davis, Dawes, Elting, W. H. George, Happel, Hun, Jenkins, Lochner, MacFarlane, Moore, Murray, Neuman, Richardson, Sautter, Shaw, Theisen, Van Allen, E. A. Vander Veer, Wiltse, and several guests.

1. *Reading of the minutes of last meeting.* The minutes as printed in the ALBANY MEDICAL ANNALS were adopted.

2. *Minutes of special meetings.* There were none.

3. *Applications for membership.* No names were presented.

4. *Reports and resolutions.* None were offered.

Dr. **CLEMENT F. THEISEN** read a paper on "A Case of Intratracheal Struma; Operation; Recovery."

At the close of Dr. Theisen's paper, the President opened the meeting for discussion, and invited the guests to participate.

Dr. **JENKINS** felt the Society was deeply indebted to Dr. Theisen for the very interesting paper he had presented. The case was one of great rarity, and he could well be congratulated for the patient's recovery.

Dr. **WILTSE** then read a paper on "Prostatitis, Due to Gonorrhœa, Acute and Chronic, Etiology, Pathology and Treatment."

The **PRESIDENT** then announced Dr. Wiltse's paper open for discussion.

Dr. **JENKINS** told of three patients with gonorrhœal prostatitis he had treated with ergot over a year ago. The result was most satisfactory in each case. A few weeks ago one of these patients returned with many symptoms of stone in the bladder. Knowing the previous history of gonorrhœa, he did not introduce a sound, but again gave ergot to the patient. This treatment again was most satisfactory, and the unpleasant symptoms have disappeared.

Dr. **SAUTTER** expressed great interest in the paper, and felt that he could add nothing to it. He questioned the advisability of leaving the urine in the bladder while exploring. If the solutions of potassium permanganate were left in the bladder it would decompose. He advised withdrawing the urine first and then injecting the solutions.

Dr. **WILTSE**, in closing the discussion, said that he was aware that ergot was recommended and often employed. The conditions to be met were a hyperæmia from passive congestion, dilated follicles and their lumen filled with inflammatory products. Massage properly employed will fulfill all these conditions, and will improve the circulation, empty the blood vessels and remove the inflammatory products. In reply to Dr. Sautter's criticism, he thought he had been misunderstood. He did not intend to convey the impression that the bladder was to be filled with urine before treatment. He thought, however, that some urine should be left, as strong solutions in an empty bladder produce much irritation.

Dr. **RICHARDSON** read a paper on "The Diagnosis and Prognosis in Fracture of Neck of Femur."

The **PRESIDENT** declared Dr. Richardson's paper open for discussion.

Dr. **JENKINS** expressed his personal appreciation of this paper, and felt that all the members present had been very fortunate in hearing such a clear presentation of the subject.

On motion, the Society adjourned. HENRY L. K. SHAW, *Secretary.*

WILLIAM H. MURRAY, *President.*

SARATOGA SPRINGS MEDICAL SOCIETY

The regular meeting of the Saratoga Springs Medical Society was held March 7, 1902, in the Business Men's Association. The meeting was called to order at 9:15 P. M., President Comstock presiding.

The minutes of the last meeting were read and approved.

Dr. SWAN presented a paper on "The Early Diagnosis and Treatment of Cancer of the Stomach."

The discussion was opened by Dr. SHERMAN, of Ballston. He said he had had several cases of cancer of the stomach, which had all occurred in men and in patients over fifty years of age. It was not easy to diagnose these cases early as it was not convenient in many cases, particularly in small towns, to obtain or examine the stomach contents. Pain, he stated, was an important symptom, and acid eructations were present in all of his cases. He had never examined the stomach contents chemically. Persistent vomiting was a suggestive symptom, and this, associated with pain and emaciation, made a suspicious complex of symptoms. He had had good results in relieving pain from cocaine and bismuth.

Dr. MORIARTA said the question of early diagnosis was important to the welfare of the patient, as the success of operative treatment was dependent upon the promptness with which the diagnosis was made. He believed an exploratory operation was wise in the suspicious cases. He had used the little capsule-like device of Einhorn for obtaining the stomach contents with satisfactory results. He was surprised to hear Dr. Swan mention condurango. It was a drug used twenty years ago, when claims were made that it was a specific in carcinoma of stomach, and he thought it had died a proper natural death. He had obtained best results for relieving pain by using dilute hydrochloric acid and compound spirit of chloroform.

Dr. SWAN, closing, said he was surprised to hear Dr. Sherman confound the hypertrophy of the pylorus in benign cases with cases of true carcinoma. He thought we should consider the possibility of cancer in all cases of dyspepsia or stomach symptoms in patients over thirty-five or forty. He had failed to omit the necessity of washing out the stomach once or twice a week to remove accumulated debris, ingesta, etc. He reported briefly a case of cancer of the stomach in a man, seventy-four, whom he was at present treating, but which case had too far progressed for operation when it came under his care, which he thought in a measure was due to carelessness of the first medical attendant.

Dr. TOWNE read a paper on "Conservative Surgery of the Hand."

The paper was declared opened for discussion.

Dr. MORIARTA believed that every particle of tissue that could be saved always should be, but it was sometimes "conservative surgery" to remove mangled members, as he distinctly remembered trying for days to save a finger, and later on for weeks to save an arm or the patient's life from cellutitis. He thought the condition of the palmar arches should be taken in consideration in conservatism. It was most important, of course, as the reader had stated, to suture all severed tendons, and these ought never to be overlooked.

Dr. SWAN said one thought had occurred to him which was not mentioned, and that was the propriety of "splicing" a tendon where it was impossible to bring the ends together. The age of patient and condition of the arteries were important factors in the good results we would obtain in these cases. We would expect better results from conservatism in the young, or in subjects not the possessors of atheromatous arteries.

There was no report of the committee on membership.

As there was no further business, a motion to adjourn was seconded and carried.

The following members were present: President Comstock, Drs. J. T. Sweetman and F. J. Sherman, of Ballston; A. S. Downs, D. C. Moriarta, C. H. Fish, M. E. Van Aernem, J. B. Ledlie, G. S. Towne, A. Hewitt, W. E. Swan, A. E. Palmer, C. B. Small, F. J. Resseguie.

FREDERICK J. RESSEGUIE, *Secretary.*

GEORGE F. COMSTOCK, *President.*

Medical News

Edited by H. Judson Lipes, M. D.

THE UNION UNIVERSITY MUSICAL ASSOCIATION.—The annual winter concert of the Union University Musical Association was given before a fairly representative audience at Centennial Hall, Friday evening, February 28th.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR FEBRUARY.—Number of new cases, 64. *Classification of cases:* Dispensary patients receiving home care, 2; district cases, 3; other charity cases, 34; total number of charity cases, 39; moderate income patients, 25. *Classification of diseases:* Medicine, 27; surgical, 6; gynæcological, 31; number of contagious diseases, 1; removed to hospital, 1; died, 4. *Visits of the Guild nurses:* Number of visits with nursing treatment, 657; for professional supervision of convalescents, 270; total number of visits in February, 927. Cases were reported to the Guild by the city physician, by two of the health physicians and by twenty-two other physicians.

Special Obstetrical Department: One completed case; three patients on the waiting list. Case confined February 1; applied January 10; dismissed February 20. Obstetricians, 2; medical students in attendance, 2; nurses in charge, 2. Number of visits by obstetrician in charge, 10; by assistant obstetrician, 1; by medical students, 9; by Guild nurses, 25; total visits, 45. Forceps delivery.

ALBANY CITY MISSION STATISTICS.—In a recently-published statement of the benevolent work accomplished by the Albany City Mission, the following facts relating to the free medical work were given: Patients treated in free dispensaries, 237; visits made by physicians in homes of sick, 1,417; medical cases treated, 395; surgical cases, 98; placed in hospital, 9.

THE CLEVELAND MEDICAL JOURNAL.—The *Cleveland Medical Gazette,* in its seventeenth year, and the *Cleveland Journal of Medicine,* at the beginning of its seventh year, have combined interests to form the *Cleveland Medical Journal.* In addition to those who were engaged in the publishing of the older journals, there has been enlisted in the support of the new one a complete representation of the medical interests of Cleveland. It has been the guiding motive of those who promoted the consolidation to unite so far as possible the entire profession of Cleveland in the support of the *Cleveland Medical Journal.* This *Journal* will be the active exponent of the highest ideals of modern medicine; it will seek to make the medical profession realize the mission of the new scientific medicine; it will stand for an active and pure professional polity; it will represent all the physicians and all the medical institutions of Cleveland; and it will not forget to chronicle the good work done by our conféres in other cities, by those in the country, or by those in foreign lands.

A NEW WORK ON SMALLPOX.—In view of the wide prevalence of the smallpox epidemic, we believe that the following note in reference to a forthcoming work on this disease will be of interest. This very timely treatise on smallpox is announced for publication early in April, by J. B. Lippincott Company. It is written by Dr. George Henry Fox, Professor of Dermatology in the College of Physicians and Surgeons, New York city, with the collaboration of Drs. S. Dana Hubbard, Sigmund Pollitzer and John H. Huddleston, all of whom are officials of the Health Department of New York city and have had unusual opportunities for the study and treatment of this disease during the present epidemic.

The work is to be in atlas form, similar to Fox's Photographic Atlas of Skin Diseases, published by the same house. A strong feature of the work will be its illustrations, reproduced from recent photographs, the major portion of which will be so colored as to give a very faithful representation of typical cases of variola in the successive stages of the disease, also unusual phases of variola, vaccinia, varicella and diseases with which smallpox is liable to be confounded. These illustrations number thirty-seven and will be grouped into ten colored plates, 9½x10¼ inches, and six black and white photographic plates.

The names of Dr. Fox and his associates assure the excellence of the work, in which will be described the symptoms, course of the disease, characteristic points of diagnosis and most approved methods of treatment.

THE PITTSBURG ACADEMY OF MEDICINE.—The Pittsburg Academy of Medicine wishes to have a live, progressive library, and in order to accomplish this end it was recently decided that the academy collect and classify the best monographs pertaining to various subjects of medicine and surgery. This plan was suggested to the academy by one of the fellows, Dr. E. E. Mayer. The advantages that would accrue from such a plan was so evident that it met with the prompt and hearty approval of the members. The president accordingly entrusted the task of collecting these monographs on the chief subjects and collateral branches to fellows doing work in the respective lines. The academy would be glad to receive monographs on all subjects. Much good would result if other medical societies followed out this plan. There is often much that is really good in medical literature that is not to be found in text-books, and for those working along special lines it would be of inestimable value.

PERSONAL.—Dr. CLINTON G. HICKEY (A. M. C., 1884), is now located at Denver, Col.

—Dr. H. F. KING (A. M. C., 1899), has located at Winsor, Con.

—Dr. CHRISTIAN G. HACKER (A. M. C., 1899), formerly of Albany, will return to this city from Gloversville and will locate on Grand street.

Book Reviews

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Paediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by HENRY W. CATTELL, A. M., M. D., Philadelphia, U. S. A., with the Collaboration of JOHN B. MURPHY, M. D., of Chicago; ALEXANDER D. BLACKADER, M. D., of Montreal; H. C. WOOD, M. D., of Philadelphia; T. M. ROTCH, M. D., of Boston; E. LANDOLT, M. D., of Paris; THOMAS G. MORTON, M. D., and CHARLES H. REED, M. D., of Philadelphia; J. W. BALLANTYNE, M. D., of Edinburg, and JOHN HAROLD, M. D., of London, with Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume III. Eleventh Series, 1901. Philadelphia: J. B. Lippincott Company. 1901.

This volume consists of 299 pages, and is almost entirely devoted to therapeutics, general medicine, surgery and neurology. In the section on therapeutics the first, and perhaps most interesting, article is "Phototherapy after Finsen's Methods," by Valdemar Bie, M. D. The apparatus used in applying concentrated rays of sun and electric light in Finsen's medical light institute is described, and the clinical results of the treatment are given. Phototherapy has given the best results in lupus vulgaris, of which six hundred cases have been treated with only five failures. Dr. J. W. H. Eyre contributes a short but interesting paper on antitoxic sera, and Dr. Beverley Robinson an article on "Clinical Aspects of Spa Treatment," in which he is fair to all concerned, the patient, the family physician, the spas and the spa physicians. In "Gonorrhœa and Marriage," Professor Louis Jullien sets forth the actual dangers from marriage of those suffering from gonorrhœa and contrasts them with the prevailing opinion as to the mildness of the disease held by the laity. Dr. Paul Reclus' article on "The Drawbacks to the Spinal Use of Cocaine and the Accidents Due to It" differs greatly in its conclusions from one by Professor Tuffier in the last volume of *International Clinics*. Besides the headache and nausea, Dr. Reclus finds that the appearance and disappearance of the analgesia are uncertain, and he has collected six fatal cases in a total of less than two thousand injections.

In the section on medicine, Dr. James J. Walsh has an article on heart disease, in which he points out that there may be no symptoms early, and that the first ones noticed may appear as disturbances of other organs, as by frequent attacks of bronchitis, diminished excretion of urine, or by nervous disturbance. He also emphasizes the fact that functional palpitation may be followed by organic disease, and states that in France it is now believed that excessive smoking can cause valvular disease. Among other valuable suggestions as to treatment, he points out that the use of digitalis has limitations, and that valvular lesions have apparently been cured by small doses of potassium iodide. A number of interesting medical and neurological cases are described, among which is "A Case of Combined Echinococcus Disease and Tuberculosis," by Charles F. Withington, M. D., and "Areas of Softening in Both Cerebral Hemispheres," by Professor Arnold Pick, which also contains the report of the confirmatory autopsy.

An article by Augusto Murri, M. D., on "Cerebellar Degeneration Due to Intestinal Intoxication," translated by Leon Lebovici, M. D., is one of the most valuable contributions in the volume. After several attacks of diarrhœa the patient developed symptoms pointing to a cerebellar lesion. The autopsy showed no gross lesion, but the microscope showed a diminution in number and a degeneration of the cells of Purkinje.

In the surgical section there are several articles on appendicitis. A. H. Tubby, M. S. (Lond.), F. R. C. S. (Eng.), writes on the prognosis of the disease and expresses the opinion that every case does not demand immediate operation. Dr. Routier, of Paris, on the other hand, advocates the early operation in all cases, and states that he has tried the temporizing method and is satisfied that immediate operation gives better results. In a clinical lecture on a case requiring double nephropexy and inversion of the appendix, Dr. George M. Edebohls states that his statistics show that twenty per cent. of all women have one or both kidneys movable, that four per cent. have movable kidneys which produce symptoms, that three and one-half per cent. have symptoms producing movable kidneys and also appendicitis, while only one-half per cent. have appendicitis and well-anchored kidneys.

The last article in the volume is an excellent one by Dr. C. U. B. Camac, with the title, "The Clinical Laboratory in Private-Practice and in the Physician's Office." The author points out how essential laboratory investigations are to correct diagnosis, and shows that but little apparatus is necessary for the equipment of an office laboratory. R. G. C.

Current Medical Literature

MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

The Use of Subcutaneous Injections of Gelatine as a Hæmostatic. (*Ueber Anwendung subcutaner Gelatineinjektionen zur Blutstillung.*)

GRUNOW. *Berliner klinische Wochenschrift, 1901, No. 32.*

The writer gives his experience, in the clinic at Kiel since 1899, with these injections in the different forms of hæmorrhage. A two per cent. solution of gelatine in a normal saline solution was employed, and 200 grammes of this solution were injected into the thigh. In addition, the usual remedies, as acetate of lead, ergot, were employed. The following are his conclusions:

1. The influence of the action of injections in controlling internal hemorrhage was observed.
2. The subcutaneous injection of gelatine is accompanied by some disagreeable symptoms which, however, do not contra-indicate its use.
3. The use of the injections is advised in all severe internal hemorrhages, but on account of their temporary action they should be continued for a time.
4. The action of the gelatine alone is not always sufficiently hæmostatic, but in combination with other direct or indirect hæmostatics, the result is satisfactory. In addition to hæmorrhage from the lungs, this line of treatment was successfully employed in hæmorrhage from the stomach and kidneys. An aneurism of the pulmonary artery with perforation was in this manner healed. It is important that the gelatine should be injected early, often and in sufficient quantity. The disagreeable accompaniments of the injections were pain, fever, eruption, and oftentimes deep swelling in the muscles. Fever was observed in every case at times with a chill and ranged from 38° to 39° C.

A Sand-Bath for the Treatment of Diseases of the Joints of the Hands and Feet. (*Ein Sandbad zur Behandlung von Erkrankungen der Hand-und Fussgelenke.*)

HOKE. *Zeitschrift für diätetische und physikalische Therapie, Band IV, Heft VIII, 1901.*

The author, upon the suggestion of Professor von Jaksch, has constructed a sand-bath for treatment of inflammations of the hands and feet. It consists of a copper box containing sand with a thermometer which passes through the top. Underneath there is a number of gas flames (forty-nine), which quickly heat the sand to 40°-60° C. The effects are local increase of temperature, diaphoresis, marked rapidity of the lymphatic circulation with the pressure of the sand, which acts as mild massage. It is used for a half hour with the sand heated to 40° C., and the results have been most satisfactory.

Arterial Pressure in Tuberculosis. (Ueber den arteriellen Blutdruck der Phthisiker.)

MAX JOHN. *Zeitschrift für diätetische und physikalische Therapie, Band V, Heft 4, 1901.*

The writer undertook some experiments in order to verify the conclusions of Regnault, who wrote an exhaustive treatise on this subject some years ago. The observations were made on 120 cases of pulmonary tuberculosis in all stages of the disease. The specific gravity of the blood was taken at the same time. Regnault claimed that the earliest symptom (*phénomène précoce*) in phthisis was a marked fall in the arterial tension, and that this occurred before it was possible to detect the tubercle bacilli. Max John on the other hand could find no such fall in the incipient stages. The specific gravity of the blood taken at the same time was also normal in these cases. Later in the disease, however, there was a marked fall in the blood pressure, and the specific gravity of the blood was lower than normal. Both the blood pressure and the specific gravity are increased in emphysema and bronchitis. Increase of arterial tension in cases where it had fallen, provided there were no kidney complications, had a very favorable prognostic importance. If the tension continued to fall it denoted an extension and aggravation of the disease. He explains the reduced pressure by the action of the toxin of the tubercle bacillus upon the vaso-dilator system, by qualitative and quantitative changes in the blood and on account of atrophy of the heart. The writer employed the Gærtner tonometer in making his experiments.

Aneurism of the Ascending Aorta with Perforation in the Vena Cava Superior. (Aneurysma der aufsteigenden Aorta mit Durchbruch in die obere Hohlvene.)

COMINOTTI. *Wiener klinische Wochenschrift, No. 36, 1901.*

During the past twenty-nine years, at the city hospital, Trieste, there have been one hundred and eighty-one cases of aortic aneurism, and twenty-one thoracic neoplasms, out of 26,495 autopsies. The writer classifies and analyses these cases, and give a complete history with autopsy of a case of aortic aneurism which perforated into the superior vena cava. The diagnosis was made *intra vitam* and was based on the history, the presence of a tumor in the region of the aorta, a diastolic murmur in the second right interspace, displacement of the heart towards the left and a marked difference between the two radial pulses. The diagnosis between perforation into the vena cava and simple compression was more difficult. It was finally made on the following grounds: fluctuations in the intensity of the venous engorgement, which were synchronous, with changes in the size of the area of dulness; the presence of a blowing systolic murmur lasting through to the diastole and very similar in character to a venous bruit; great congestion of the venous system above the point of communication on account of the insufficient capacity of the collateral branches; presence of œdema and varicose veins over the thorax; positive venous pulse; and the sudden onset of the above symptoms.

Sarcoma of the Prevertebral Lymphatic Glands, Involving the Solar and Coeliac Plexuses.

W. Findlay and J. W. Findlay. *Glasgow Medical Journal, September, 1901.*

One of the chief points of interest in this case was the obscurity of the cause of illness during life. L. S., stone-mason, aged sixty-two, had been a sufferer from chronic bronchitis for years, which confined him to the house during the winter and spring months. About two years before he was seen by the writers the patient had an acute attack of severe vomiting lasting several days, the stomach retaining absolutely nothing. The same thing occurred several times before the onset of his final illness. In October, 1900, he had acute broncho-pneumonia, and in the following December began to suffer from sickness and vomiting, with abdominal pain. For two months the stomach retained hardly anything, not a day passing without a fit of vomiting. The vomited matter consisted of the food taken, with an abundant amount of glairy mucus, and several times it contained blood. Great pain and often tenderness were present in the epigastrium, to the left of the umbilicus, in the right iliac fossa, and around to the right flank. Pain was practically constant, with several exacerbations from time to time. Patient never had any jaundice, and the urine was free from albumen and sugar. No tumor could be detected in the abdomen. A marked degree of aortic pulsation was present in the epigastrium, and what appeared to be aorta was palpable nd remarkably tender. Before death all the symptoms became more and more pronounced with great emaciation, weakness of the lower limbs, and inability to empty the bladder. A few hours before death, the patient was seized with severe paroxysmal pain of the most agonizing character, in the upper part of the abdomen, and there were tender spots in the epigastrium and right hypochondrium. The abdomen was greatly distended and tympanitic, and no liver dullness could be obtained on percussion. Perforative peritonitis, due most probably to the rupture of a malignant ulcer of the stomach, was diagnosticated.

The post mortem examination resulted in the following findings: No evidence of peritonitis and the intestines and stomach were free from tumor or ulcer, and presented no abnormal features. A small and somewhat lobulated tumor was found situated at the upper border of the pancreas. This commenced about a quarter of an inch to the left of the head of the pancreas, invading the substance of the gland only to a slight extent, but involving the connective tissue in front of the aorta, and around the cœliac axis and the hepatic and splenic branches of the same. At the upper end of the tumor remnants of the prevertebral lymph-glands could be made out. The tumor, as a whole, was soft, and the central third of the consistence of cream. The pancreas was firm and of a dark red color, while both in the body and the tail, extravasations of blood into the areolar tissues of the gland could be made out. Microscopical examination showed that the tumor was a lympho-sarcoma, made up of small round cells and delicate stroma, and the extension of the growth from the lymph-gland remnant could be traced. Both in the remnants of lymph-gland, and in the tumor itself, there were numerous hæmatoidin granules, and evidences of recent hæmorrhages. Sections around the cœliac vessels showed that the nerves of the cœliac plexuses were not only surrounded and pressed on by the tumor tissue, but that they were actually invaded by it, and an appearance was seen of round cell infiltration making its way along their sheaths and lymph spaces. The cœliac neuralgia that the patient suffered from during life was sufficiently explained by the presence of the tumor around the solar and cœliac plexuses. The constant vomiting and severe constitutional disturbances and emaciation, could be also explained by this interference with the sympathetic system.

In conclusion, the writer remarks that distinguished surgeons have performed laparotomies for suspected intestinal obstruction or acute perforative peritonitis, and have found instead hæmorrhagic pancreatitis.

NEUROLOGY

Edited by Henry Hun, M. D.

A Contribution to the Study of Erb's Disease or Myasthenia Gravis. (Beiträge zur Lehre von der Erbschen Krankeit)

LAQUER and WEIGERT. *Neurologisches Centralblatt, 1901, No. 13; Centralblatt für Nervenheilkunde und Psychiatrie, 1901, July 22. No. 138.*

Laquer reviews the clinical history of a case of myasthenia gravis which presented the following symptoms: double ptosis, most marked on right side; very great fatigue of the masticatory and laryngeal muscles and those of the extremities; repeated attacks of cardiac failure. After four months rest in bed together with the use of kali iodidum and arsenic no improvement occurred. Then followed great muscular weakness of the entire body, brought on after the slightest muscular effort. Later the muscles of respiration became involved, to be followed soon after by death in February of the following year.

The important part of the report was that upon the autopsy by Weigert. Preparations of the brain and cord for both connective tissues and fibre sheaths showed no disease. In the anterior mediastinum was found a red mass, which in section, was permeated by numerous white nodules. This tumor, which occupied the site of the thymus gland, showed under the microscope the characteristics of this gland: numerous lymphoid and epithelioid cells, and the well-known concentric corpuscles of Hassal. The growth gave evidence of malignancy in the proliferation of the cells into the vessel walls. It was further permeated by numerous hæmorrhages. There was also found in the permysium, as well the endomysium as the epimysium of the muscles which were examined (the diaphragm, deltoid and heart), a great abundance of cells which presented all the characteristics of the cells of the thymus gland. Thus there were presented, first, a malignant thymus tumor; and, secondly, thymus metastases in the muscles. Two other cases were reported in which intra vitam the diagnosis of myasthenia gravis was made, in one of which Hansenmann found a sarcoma of the thymus gland. In the other case Weigert found a mediastinal tumor whose origin was uncertain. From these cases one may assume an etiological relation between disease of the thymus gland and the production of the symptoms of myasthenia gravis.

Weigert did not discuss the relations of the pathological findings to the clinical symptoms. He did not feel, however, that such a condition was to be expected in every case of myasthenia, for the changes were so coarse that they could not have escaped notice if present in other earlier cases. He himself, in a case later examined, had been unable to discover a similar condition in the muscles. In all probability we have not to do with a single disease, but rather a peculiar group of conditions.

Paroxysmal Angeiosclerotic Myasthenia. (Zur Klinik der angiosclerotischen paroxysmalen Myasthenie—"Claudication intermittente" Charcot's—und der sog. spontanen Gangrän.)

H. Higier. *Deutsche Zeitschrift für Nervenheilkunde, xix, 5 u. 6, July 2, 1901.*

The writer bases his contribution upon twenty-three cases of this rare disease, which has been variously known, since Charcot first noted its peculiarities in 1858, as "intermittirendes Hinken," "paralysie douloureuse ischemique," "angio-sklerotische intermittirende Dysbasie," "intermittirende Muskelparese," "Endarteriitis der Beine," "Gangræna spontanea Chirurgorum." From his observation of these cases he has derived the following conclusions:

1. The most exact clinical description of the disease is conveyed in the term "Myasthenia angiosclerotica paroxysmalis."

2. This comparatively rare condition, as far as the case records show, is relatively frequent among the Russian Poles and in the Lithuanian provinces.

3. The greater number of patients are Jews.

4. The disease appears only exceptionally in women.

5. It appears most frequently in young persons (in the twenties), or in early manhood (in the forties and fifties).

6. The principal cause appears to be a neuropathic predisposition and congenital weakness of the circulatory apparatus.

7. Overuse of the lower extremities, exposure to wet, thermic influences, alcoholism and nicotinism hasten the outbreak of the affection. Syphilis and rheumatism play no part in the etiology, and diabetes only an insignificant one.

8. The idiopathic arteriosclerosis localizes itself most frequently in the lower extremities, not infrequently symmetrically.

9. Of the principal symptom, the pain, three general clinical forms may be described: (*a*) pains with walking, which occur in connection with the paroxysmal myasthenia or the intermitting lameness; (*b*) permanent pains,

which appear during rest as painful paræsthesiæ, are characteristic of the progressive stages of the disease and only with occasional exceptions, in progressive myasthenia, dominate the clinical picture for years; (*c*) pains due to the appearance or the existence of gangrene.

10. A characteristic symptom-complex on the part of the general condition and in the mental sphere follows the appearance of the ulceration and gangrene, falsely called spontaneous gangrene, in cases of diffuse angiosclerosis in the upper and lower extremities.

11. The disease occasionally progresses for years under the designation of a severe vasomotor or sensory neurosis, without clinically visible organic changes in the blood vessels.

12. In consequence of the permanent narrowing of the blood vessels (the organic substratum of the affection) there appear, in the course of the disease, a great number of vasomotor disturbances, (of functional import), which under the form of increased excitability or diminished equilibrium of the vasomotor centres, predispose to the occurrence of the gangrene.

13. The greatest difficulties in the differential diagnosis are offered by diseases due to obliteration of the blood vessels and to paroxysmal myasthenia, as erythromelalgia or Raynaud's disease.

14. There probably exist two principal groups of idiopathic endarteriitis: (*a*) the more frequent form, with primary localization of the morbid process in the vessels; (*b*) the more unusual form, with preceding nerve degeneration, the so-called neurotic angiosclerosis. The functional element is displayed in both forms, but the constitutional factor is especially important in the causation in the first form.

15. Rational hygienic and dietetic rules, especially the anticipation of injuries from without of either psychical or physical nature (absolute mental and physical rest), are indicated to prevent the beginning of the gangrene, which not seldom requires surgical intervention, and tends to a fatal termination.

16. In doubtful cases with severe pains and tendency to ulceration, exarticulation and amputation may be avoided by less severe operative procedures, as elongation, torsion and resection of the nerve trunks or of the sympathetic investiture of the great vessels, as has been more or less successfully done by Chipault and his followers in cases of *mal perforant* of tabetics and alcoholics.

On the Etiology of Chorea. (Zur Ætiologie der Chorea minor.)

Fröhlich. *Jahrbuch für Kinderheilkunde, September, 1, 1901.*

After a somewhat exhaustive review of the literature the writer analyzes forty-seven cases of chorea coming under his care during the past seven years. These he divides into four groups. The first group contains fifteen cases where acute rheumatism occurred before or during the attack. The second group consisted of sixteen cases in which fever, sore throat, erythema nodosum, painful and swollen joints were observed either before or during the attack of chorea. Those cases where chorea followed other infectious diseases formed group three and numbered but four. Group four contained twelve cases where there had been no previous disease of an infectious nature. A distinct cardiac murmur was heard in twenty-five of the cases and of these eleven, or seventy-four per cent. occurred in the cases having acute rheumatism. Most of the cases occurred in children from six to eleven years of age, and thirty-nine out of the forty-seven cases occurred in girls. In twenty-four cases there was a family history of some nervous affection. One case mentioned is worthy of notice. A child four and a half years old was admitted to the hospital with a gonorrhœal vulvo-vaginitis in which the gonococci were detected. A little later choreic twitchings were observed and a week after this there was a distinct systolic murmur. Ten days later she developed an attack of gonorrhœal rheumatism. The course of events was very interesting: vulvo-vaginitis gonorrhoica, chorea, vitium cordis and rheumatismus gonorrhoicus.

Contribution to the Study of Tumors of the Fourth Ventricle. (Beiträge zur Lehre von den Geschwülsten in 4. Ventrikel.)

WALTER CIMBAL. *Virchow's Archiv, Vol. 166, Heft 2, 1901.*

In this paper Cimbal reports two cases of his own and reviews all the obtainable literature on the subject. The paper contains in a tabulated form reports from various authors on 33 cases of tumor of the fourth ventricle. His conclusions are based on a study of these cases. He divides the symptoms which should lead to a suspicion of fourth ventricle tumors into psychical symptoms, general compression symptoms, and symptoms due to localized pressure on the medullary nuclei or on their association fibres. The author lays stress on psychic disturbances and states that in the later and more carefully worked out cases they are very common. He thinks that the combination of psychic disturbances with local symptoms is very suggestive of fourth ventricle tumors. The most common forms of psychic disturbance are a tormenting sleeplessness with melancholic tendencies, often of an intermittent character. Sometimes true disorientation occurs. The cases in which psychic phenomena were not observed were usually poorly observed from a neurological point of view, or else were cases where the tumor originated outside of the fourth ventricle and only pressed on part of it.

In nearly one-third of the cases optic nerve or retinal changes were observed, a percentage which Cimbal considers very high. Other symptoms of general compression frequently seen were cramps, fixed pupils, increased reflexes, and headache often worse at night, and generally in the back of the head or neck. Vomiting was noticed in over one-half of the cases, due probably, the author thinks, to pressure on the vagus nucleus.

Of the local pressure symptoms paralyses of the eye muscles occurred in more than one-third of the cases. The abducens was most frequently affected. The facial nerve was affected in a little over one-fourth of the cases, the acoustic and glosso-pharyngeal occasionally. The tumor in most of the cases gave no metastases. The author thinks diagnosis and surgical intervention possible in some cases.

The pathological examination of the author's tumors brought out the interesting point that the ganglion cells in the medulla are extraordinarily resistant to mere compression, on the other hand relatively slight pressure leads to cerebellar changes, particularly atrophy of the Purkinje cells.

LARYNGOLOGY AND RHINOLOGY

Edited by C. F. Theisen, M. D.

A Fatal Case of Tuberculosis of the Maxillary and Sphenoidal Antra. (Ein Fall von Kiefer und Keilbeinholentuberculose mit todtlicher Ausgang.)

RUDOLF PANSE. *Archiv für Laryngologie und Rhinologie, Band 11, 1901.*

History of a girl sixteen years old, who came to the Dresden throat clinic to be treated for nasal polypi. Polypi had been frequently removed for the relief of headache and nasal obstruction, but had always returned. On examination the nostrils were found to be much widened, and the soft parts œdematous. The nostrils were thoroughly cleared of polypi, and a powder of one part of silver nitrate to ten parts of milk sugar was afterwards used. A month after patient first came to the clinic she was brought back by her mother with a history of sudden and total blindness. She had not previously complained of her eyes. It was thought that the optic nerve had become implicated by a diseased condition of the ethmoidal, sphenoidal or frontal sinuses, and on the same day both frontal sinuses were opened. The mucous membrane was found to be very red, but could be easily separated from the bone. No pus was found. When the nasal bones were exposed for the purpose of entering the ethmoid cells, defects in the bones filled with granulations, were discovered. This condition was thought to be due to syphilis, and an energetic antisyphilitic treatment, consisting of inunctions and iodide, was started. The ophthalmoscopic examination showed the presence of a double neuroretinitis. The specific treatment did not have the slightest effect. The nasal wound did not heal, and was constantly filled with granulations. Repeated microscopic examinations of this granulation tisssue, finally revealed the presence of giant cells, and a diagnosis of tubercular osteitis with accessory sinus complication, was made. A radical operation was then decided on. The nose was split, the nasal bones were removed, the enormous tubercular granulation masses were removed from the ethmoidal, sphenoidal and frontal sinuses, the cribriform plate of the ethmoid, part of the sphenoid, the septum and anterior wall, were removed, so that a large part of the frontal lobes was exposed. Between the dura and skull many caseous granulation masses were found, which were scraped out. The immediate result of the operation was normal temperature for three days and some improvement in the general condition.

Patient could also distinguish between light and darkness. Soon after the operation, however, the temperature rose again and frightful headaches developed. Patient died nearly six weeks after the operation. A few days before death, albumen appeared in the urine, and there was much vomiting.

Cleft Palate and its Relation to Speech.

G. Hudson. *American Medicine, October 5, 1901.*

The writer begins his article with the statement that while the palate and tongue are both important organs of speech, the former is the more important, for it is not only essential in the enunciation of nearly all the elements of speech, but it is also an important factor in the regulation of the resonant chambers of the voice. The purely vocal elements of speech such as the vowal sounds, may be articulated when the palate is defective, but their resonance is so much impaired that they are scarcely recognizable. In the articulation of the resonant sounds the palate is most essential. Of twenty-three consonant sounds only two, the "*m*" and the "*n*" can be given intelligibly when the palate is not intact. All the consonant sounds, in the enunciation of which the tongue is a prominent factor, the "*th*" hard and soft, the *s, z, sh, t, d, n, e, r, k, g, ng, b, y,* as well as those in which the lips and teeth are used, the *p, b, n, wh, w, f* and *v,* are impossible to a person with a defective palate. The tongue and the palate act together in the processes of articulation, and the palate also serves to prevent the sounding breath from passing through the nostrils and to focus it upon the particular stop position that is being used.

The various defects of the palate that interfere with speech are: (1) perforations; (2) a lack of union between the lateral halves, commonly known as a "cleft;" (3) paralysis of the muscles.

The purely vocal sounds are the only ones that can be even approximated when the palate is cleft, and the consonant sounds are generally almost entirely unintelligible and are made with a totally different mechanism. Perforations and paralysis of the musculature of the palate are acquired defects, and generally appear after the development of the faculty of speech, while the cleft palate is congenital and comes before the development of the speech faculty. As surgical measures for the closure of the cleft palate are used mainly for the purpose of improving speech, they should be undertaken as early in the formative speech period as the operation can be performed. Surgical measures as a rule give the patient only a little better chance for the development of good speech, and even if it were possible to furnish a perfectly normal palate, the character of speech would remain almost unchanged, because the patient had never learned to use the natural mechanism of speech, and has been forced to substitute mechanisms that are inadequate to the requirements.

In conclusion, the author mentions a few simple surgical procedures, done for the purpose of increasing the available size of the velum and giving in greater freedom of action, *i. e.:* (1) separating the adhesions that often exist between the pillars of the palate on either side, and the remnant of tonsils; (2) forcible stretching of the velum with the finger after the division of some of the tense fibres of the palato-glossi and the palato-pharyngeal muscles; (3) training and developing the velum palati muscles by means of both direct and indirect voluntary exercise.

A Contribution to the Knowledge of Acute Purulent Perichondritis of the Nasal Septum. (Zur Lehre von der Perichondritis acuta purulenta Septi Narium.)

M. LUBINSKI. *Deutsche medicinische Wochenschrift, September 19, 1901.*

From an etiological standpoint, the traumatic cases of perichondritis of the nasal septum, a comparatively rare affection, are according to the literature on the subject, by far the most common. By the traumatic cases is meant those due to direct injury to the nasal cartilages, or those due to the forcible removal of crusts and excoriations on the nasal septum. Of the twenty-four cases treated during recent years at the Berlin Polyclinic, twenty were due to traumatism, two to lues, one to erysipelas and one resulted from carious teeth. Of fourteen cases observed by Wroblewski (Warsaw), six were caused by traumatism, one by erysipelas, one by typhoid and one by smallpox. In four of the cases the etiology could not be determined. Other idiopathic cases have been described by Schroder, Suchannek and Kuttner. In these cases, without any apparent cause (although they were due to infection of some sort), a purulent exudate formed on the septum between the perichondrium and the cartilage.

The author reports two cases, one occurring in a boy twelve years of age and the other in a woman aged thirty-six. In the latter case the condition was probably due to carious teeth. In the boy's case the cause was unknown. In both cases the nose was red, swollen and extremely tender to the touch. On inspection of the anterior nares, both nostrils were seen to be filled with dark red tumors, one on each side, springing from the septum. They were extremely painful to the touch. The treatment in both cases was the same, *i. e.,* deep incisions through the tumor and tamponment of the abscess cavity. This treatment was effective, both patients getting well in about ten days, the nose, with the exception of some flattening and widening of the bridge, regaining its normal shape. A perforation of the septum did not result in either case.

PÆDIATRICS

Edited by Henry L. K. Shaw, M. D.

Vomiting in Children Associated with Acetonuria. (*Les Vomissements avec Acétonémie chez les Enfants.*)

MARFAN. *Archives de Médecine des Enfants, November, 1901.*

Cyclical or periodical vomiting in children has received much attention during the past ten years. Marfan adds a valuable contribution to this subject in his description of an acute affection characterized by incessant vomiting and by acetone in the urine. This disorder occurs between the age of one and eight years. The vomiting is sometimes preceded by a few hours of lassitude, diminished appetite or slight headache. When the vomiting commences it continues until the end of the disease. There is much nausea and all food—solid or fluid—is at once expelled. A change of position is apt to cause an attack of vomiting.

Marfan observed in several of his cases a marked odor of acetone in the first material vomited. The vomitus is strongly acid. The urine has the characteristic odor of acetone. It never contains albumin or sugar. Physical examination of the stomach reveals no distension, dilatation or pain. The liver is normal. There is never any diarrhœa, but a moderate degree of constipation is always present. The rectal temperature is slightly above normal. The heart and lungs show nothing abnormal.

When the disorder has lasted three or four days there is marked emaciation. The average duration is three days and the longest case was fourteen days. The recovery is rapid—almost instantaneous in fact. This disease is subject to relapses, but not to the degree often described. The most important rôle in the etiology of this disorder is a neuropathic predisposition. The food has little influence, for it frequently occurs in children who are on a strict diet and under careful observation.

The writer discusses the various theories as to the source and significance of acetone. He believes that the presence of acetone taken by itself has very slight significance, but it is always the companion of true pathologic toxins. The disturbance in the nutrition liberates an excess of the acetone and causes the autointoxication, which is responsible for the vomiting. He suggests that the pathogenesis may be analogous to that which follows chloroform anæsthesia.

This disease is independent of any gastric affection or disease of the intestinal tract. The complete absence of digestive troubles and of objective symptoms from the stomach or intestines, the sudden termination, etc., are all contrary to this idea.

Marfan analyzes the cases reported by American writers and concludes that in spite of various differences the resemblance between vomiting with acetonuria and periodic vomiting is complete. Diabetes, acute gastric diseases and tubercular meningitis are discussed under the differential diagnosis. The prognosis is invariably good. In the treatment a restricted diet is recommended. Small doses of magnesia are given on account of the laxative and alkaline properties. Injections of normal salt solution night and morning gave the best results.

In conclusion Marfan states that there exists in children an acute, nonfebrile disorder characterized by uncontrollable vomiting and acetonuria. The duration is from two to six days and recovery is sudden and complete. It is closely allied to the disorder described as cyclical vomiting in children.

Remarks on Lumbar Puncture in Tubercular Meningitis. (Einige Bemerkungen über die Lumbalpunction bei Meningitis tuberculosa.)

FRIEDJUNG. *Wiener klinische Wochenschrift, No. 44, 1901.*

This paper was instigated by a recent article by Breuer on the diagnostic value of lumbar puncture in tubercular meningitis and the author does not claim to put forth any new or original facts. He thinks that lumbar puncture has some therapeutic value in relieving the severe headache. To illustrate this point the case of a seven year old child is reported where the puncture was made seventeen times and each time the child stated her head felt distinctly better.

One cannot recognize tubercular meningitis from the fluid alone. The author has had many cases of basilar meningitis in which the fluid was perfectly clear. In one case of epidemic cerebro-spinal meningitis the fluid obtained six weeks after the onset of the disease was clear and sterile. He does not believe as has been claimed by Bertham and Moser that a clear fluid is obtained in only five per cent. of the cases of tubercular meningitis. On the contrary he thinks that if a clear fluid is obtained by lumbar puncture in a case just presenting symptoms of meningitis, it is probably a tubercular form.

Breuer claimed that coagulation of the fluid showed positively that there was some inflammatory change in the meninges. The author thinks this statement too broad, as he has found coagulation to occur in the fluid from cases of congenital hydrocephalus and brain tumors.

The most important value of the spinal puncture is to detect the tubercle bacillus. Formerly this was frequently negative, but newer methods have made positive results more frequent. The author recommends that the fluid be allowed to stand undisturbed until it has coagulated. The coagulum is then carefully stained.

The bacilli escape detection because frequently at the beginning of the disease free bacilli are present in the fluid from the subdural space instead of the subarachnoid space. Pfaundler was the first to call attention to the important fact that the further advanced was the disease the more liable was one to detect the bacilli. There is therefore some value in making the examination in order to detect various stages of the disease. Friedjung concludes that the detection of the tubercle bacilli only gives us another proof of a diagnosis generally assured and a negative result is without diagnostic value, so he would employ lumbar puncture only in those cases where a therapeutic effect is desired or where it is necessary to verify the diagnosis.

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ALBANY MEDICAL ANNALS

Original Communications

THE BEARING OF ORAL PATHOLOGY ON GENERAL MEDICINE*

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In reviewing the evolutionary forces at work during the past century, nothing approaches the advances made in mechanical and scientific apparatus. The inventive forces of the world appear to have been occupied with the main idea of providing mechanism and instruments, which would more economically take the place of human hands and brains. Wherever possible these scientific discoveries have been utilized to remove the practice of medicine and surgery from the field of empiricism. The stethoscope, laryngoscope, clinical thermometer, sphygmograph, Roentgen-ray and skiagraphs, and hundreds of similar inventions have tended to place the diagnosis of disease on a more scientific basis. Without underrating the value of all these inventions, it cannot well be gainsaid that modern medical education, with the aid of all this scientific apparatus, has a strong tendency to make machines of many graduates who automatically diagnose and treat the readings of their apparatus, and not their patients, with their endless variations and idiosyncrasies.

In 1876, when I matriculated at the Albany Medical College, I well remember how recent was the introduction of the clinical thermometer, which was used more to corroborate the results gained from observing the different forms of pulse, appearance of the tongue, eyes, extremities, skin, etc. How much is this valuable instrument abused at the present time by physicians who depend, it might truly be said, simply upon its readings, for not only a true prognosis but also an accurate diagnosis.

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*Read before the Medical Society of the County of Albany, February 12, 1902.

The truly great physicians of the world have all achieved their successes through their natural ability to observe in disease all the minor, as well as the greater, departures from physiological conditions. This ability for minute differentiation of clinical observation is well illustrated in the writings of the celebrated physician, Galen, who described no less than twenty-six varieties of pulse. The truly great physician will always be an accurate observer of every part of the human economy, and his greatness will always be measured by his ability to see and properly comprehend the meaning of the endless departures from the physiological conditions.

With this introduction, I desire to call your attention to the fact that, co-incident with the development of medical science during the past three centuries, the relationship of the oral cavity to the rest of the body has been continually receiving less attention in the medical curriculum. It may not be generally known that up to about the seventeenth century, nearly all the dental work performed was done by physicians, and that it was part of their regular practice. The great amount of mechanical technique required in this specialty and the rapid development of scientific medicine were unquestionably the two reasons which caused medical men to drop dentistry entirely from their practice.

The history of the dental art shows the terrible decadence of dentistry during the seventeenth and eighteenth centuries when, having been dropped from the medical course, it fell into the hands of the barbers. From the commencement of the nineteenth century we may date its rapid scientific development, especially in the United States, so that in 1840 the American practitioners were knocking loudly at the doors of medical colleges for recognition, and demanding that its principles be properly taught. The refusal of the medical educators of that period to accede to this request led to the establishment of American dental colleges, which have turned out graduates trained in all the general principles of medicine. By means of this medical education, and their exceptionally superior technical training, the graduates of the American dental colleges have had the best part of the world as their clientele for more than forty years. A constantly increasing proportion of practicing dentists have the regular degree of Doctor of Medicine, and for some years have been organized as a regular section of the American Medical Association, thus giving the official sanction of that organization to the recognition of dentistry as a specialty of medicine. This section has been very instrumental in placing dental doctors in medical colleges, and stomatologists on the hospital staffs of many institutions in the West. The East, with its natural tendency to conservatism, is slow to follow this example of western progress and, as a result, the graduate of any of our eastern medical institutions is, under ordinary circumstances, absolutely ignorant of dental principles and local pathology of that region circumscribed by the gums, the teeth and the alveolar process.

The mouth is the doorway to the digestive tract; the first stage of digestion is dependent upon proper insalivation of all of the incepted food, and this necessarily means proper mastication. This fact alone should make it incumbent upon the physician to thoroughly appreciate the value of the preservation of the natural teeth, and the necessity for understanding how this can best be accomplished. For this purpose he must have a good conception of what is known of the etiology of dental caries, and of the loss of the teeth; in fact, a thorough knowledge of dental embryology, anatomy, histology and pathology, is as important to the physician as it is that he should thoroughly understand any other portion of the body.

Recognizing the impossibility, in the short time at my disposal, of going over the entire field from fœtal life to senility, I will simply endeavor to make clear to you a few of the more important pathological conditions, and hope to show their value when properly understood in the diagnosis and prognosis of disease. For this purpose it may be best to separate our subject into two subdivisions; first, considering it from a standpoint of semeiology where the local pathogenic condition is merely a symptom of some constitutional disease; and, secondly, from an etiological standpoint in which the abnormality found in the mouth may truly be said to be the exciting cause of other functional disturbances.

When we consider the vast network of fine capillaries that freely anastomose through the gum tissue, and also the fact that they are the arterial terminations of one of the longest of blood courses, it is not unreasonable to suppose that in all forms of malnutrition, the tissues nourished by this ultimate capillary network, should be the first to exhibit symptoms due to a lack of normal nourishment. The gums, the pulps of the teeth and the lining membrane of the roots, by means of which they are properly articulated in the alveolar sockets, are the parts nourished by these capillaries.

It is a fact not well known in general medicine that in all diseases of the vital organs, before any other clinical symptoms are made manifest, these tissues assume a pathological appearance varying in character and degree according to the nature and severity of the disease in question. To be able to comprehend this departure from the normal condition of the gums and peridental membrane, it is necessary to be absolutely familiar with the physiological appearance of these tissues. A study of the clinical aspect of the gums is by no means a simple matter, as there is no more vulnerable tissue, nor any more sensitive to the slightest variations in nutrition. Atrophic changes are liable to be produced by numerous local causes, and thus easily mislead the student. When, however, the changes in the local appearance of the gums is merely symptomatic of some constitutional disease, the acute local symptoms continue to increase in severity with the progress of the disease, and in consequence of this the clinical aspects of the gums in these vital diseases become great aids in prognosis.

I have left for the last what is unquestionably destined to become one of the most valuable scientific aids in the oral cavity in the diagnosis and prognosis of disease, and that is the secretions found in the mouth and commonly called the saliva. These do not consist alone of the fluids excreted by the parotid, submaxillary and sublingual glands, for added to them are the excretions from the mucous follicles which permeate the surface of the entire gum tissue. In health this fluid is neither viscid nor too thin. It is neither acid nor alkaline in reaction. In disease, however, it has been amply demonstrated that the secretions coming through the imperfectly nourished gum tissue necessarily lose their ordinary physiological characteristics, and the complex variations of saliva in different diseases can only be appreciated by a careful chemical analysis. The application of the chemical analysis to saliva for diagnostic purposes was first undertaken some years ago by an American dentist in Paris, Dr. Michaels, and the study of this subject is being vigorously prosecuted at the present time in the chemical laboratories of a number of dental colleges. The prospects are that the results will give to the medical profession, a scientific aid in diagnosis and prognosis that will compare favorably with, if it will not eventually outclass in value, our present urinal and blood examinations.

It is not my purpose to suggest that the oral cavity, as an aid to diagnosis, is something new to the medical profession. The examination of the tongue of the sick patient must be almost as old as the records of medical practice. Again, it is a well-known fact that medical men look for the toxic effect of mercury, not only in an excessive flow of saliva, but also in the distinctive bluish tinge that marks the entire area of gum tissue. It may be added that nearly all the mineral poisons produce similar alteration of the color of the gums. I would, however, endeavor to make it clear, that the treatment of disease at the present day could be very much improved if this ancient line of observation would again be taken up by the physicians, and advantage taken of its limited possibilities. It is unnecessary to state how much a patient could be benefited if vital disorders could be diagnosed in their incipiency. We all know how far they generally have progressed before the physician recognizes the fatal malady. A red glazed tongue with characteristic swollen hemorrhagic gingivæ, and rapid caries of the teeth, are frequently the only signs of an incipient diabetes. Likewise, the characteristic whip-cord like tumefaction of the gums over the palatal surfaces of the teeth is one of the earliest signs of chronic Bright's disease. To give a practical illustration of this, I might say that on numerous occasions it has fallen to my lot to make a diagnosis of diabetes or Bright's disease, months before the patient's physician could corroborate the same from the ordinary urinal examination.

In infantile scorbutus, that horrible result of improper feeding, there is no sign of more diagnostic value than the spongy, bleeding, hypertrophied gums, accompanied by an extensive resolution of the infantile tooth structure. Fourteen years ago, when medical men were issuing death certificates of rheumatism for children dying from this disease, it was my good fortune to have a child of sixteen months of age brought to me for the purpose of alleviating the little sufferer's intense toothache. The unnatural condition of the mouth, with the symptoms just enumerated, impressed me so greatly that I was not satisfied until by exclusion I came to the determination that the little sufferer's horrible condition was due to his having been fed continuously on a proprietary cream preparation. In curing the mouth sufferings of my little patient, I unwittingly hit upon the true diagnosis of the disease, and to-day he is a vigorous young lad just preparing for college. The published record of this case enabled a brother dentist to properly diagnose the same disease in his own child, with the result of saving its life.

As constitutional diseases increase in severity, the mouth symptoms likewise assume a graver aspect. Not only does a more or less rapid atrophy without sufficient repair of the gums ensue, but this tissue necrosis extends its area to the alveolar sockets in which the roots of the teeth are imbedded, and there results at certain stages, in certain diseases, a continual flow of pus from the gingivæ. This condition is known among stomatologists most generally as pyorrhea alveolaris, although it has been called by many other names, such as Rigg's disease, chronic alveolitis, phagedenic pericementitis, septic gingival catarrh, interstitial gingivitis, etc.

It must be perfectly apparent how damaging to the patient's chances of recovery, suffering as he is from some serious chronic disorder, to have added to the original cause of the trouble the constant swallowing of such a virulent form of pus as accompanies bone resolution. Too often the patient's only chance of recovery is lost because the physician has made no provision for the elimination of this septic drain into the digestive tract. In this manner pyorrhea alveolaris, while starting merely as a symptom of some other disease, would in turn frequently come under our second division and take rank as a direct cause of some fresh disease; in fact, it often occurs that the original disease may be entirely cured and, because of the lack of local treatment, the pyorrhea alveolaris still remaining acts directly as the cause of some fresh functional disturbance. This may be not only a chronic gastritis, but frequently the result is glandular infection, tonsilitis, middle ear suppurations, and more or less general autointoxications.

The pertinent point then remains that in the treatment of all serious disorders the mouth should be carefully examined, and if it be found that pus is present, either freely in the mouth or by pressure exuding from the gums, it behooves the physician to give more careful attention in the treatment of the original malady, besides advising local treatment. It is untimely to go into the detail of treating this disease, but this much may be said authoritatively, that there is no more excuse for a septic condition of the mouth remaining uncured than for such a condition to exist in any other part of the body. Considering pathogenic expressions in the oral cavity as a cause of disease, pyorrhea alveolaris is perhaps the most prominent and insidious that attacks the health of the human race. Statistics have shown that it is more productive in the loss of human teeth than all other causes combined. As an etiological factor in autointoxications, it is lately receiving more medical attention, especially in England. This disease, however, is not the only means by which pus is daily carried through the digestive tract and absorbed by the circulation. Modern dentistry, with its hosts of practitioners, furnishes its proportion of unscrupulous and incompetent dentists. From this source emanates a very considerable proportion of such diseases as I have previously mentioned. A badly fitting crown or piece of bridge work, or even a poor filling with roughened and jagged edges protruding under the margins of the gum, is frequently by means of its irritation the direct cause of a constant flow of pus which is being swallowed by the patient.

The death of the pulps of teeth, with the result of an alveolar abscess, is one of the most frequent examples in this category. After an acute attack of alveolar abscess has subsided, as a rule, the patient's pain, as far as that particular tooth is concerned, is ended, and a chronic form of alveolar abscess frequently exists for years, without any apparent discomfort to the patient, although he is hourly swallowing the pus that emanates from the necrotic material in the alveolar socket.

The modern dentist is alive to the necessity of removing all pus foci in the mouth, but there are numerous other dental practitioners who pay no attention to these septic conditions and, as the mouths of these patients are generally never examined by their physicians, this knowledge escapes them. No plea can be made too strong for medical men to be constantly on the watch for the bad effects resulting from the swallowing of septic matter, and it may be stated unhesitatingly that there is no possible excuse for the retention of any pus producing agent in the mouth of the patient.

Modern dentistry provides means for the absolute cure of every form of septic disease arising in the region of the alveolar process. In attaining this result, it has simply departed from the traditions of ancient dentistry and brought into this limited area the practical teachings of modern surgery. Necrotic tissue of all kinds is antiseptically removed. Wherever possible, the natural teeth are preserved even to the extent of amputating portions of necrosed roots, which can be replaced by artificial roots manufactured from porcelain, a material free from the possibility of disintegration. Operations are conducted with the same attention to the care of antiseptic environment as in general surgery, and it behooves the physician of this day to become thoroughly acquainted with the achievements of stomatology so that he can knowingly discriminate between the good and the bad.

SOME NEEDED AMENDMENTS TO THE CODE REGARDING THE WAIVER OF PHYSICIANS' PRIVILEGE.*

By JOHN DeWITT PELTZ,

of the Albany Bar.

Every learned profession carries with it responsibilities, and he who can best and most easily respond to their demands will be at the same time the most helpful to others and the most successful for himself.

I well remember a remark once made to me by a distinguished physician. He said: "I can readily understand how one can take the responsibility of another man's life, as a doctor does, or of his soul, as a clergyman does, but I could never understand how one can take the responsibility of another man's pocketbook, as a lawyer does."

I told him that we of the law do not, as a rule, find the burden intolerable, but, on the contrary, that we are usually willing to have it a little heavier.

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*Read before the New York State Bar Association at its annual meeting, January 21, 1902.

Foremost among the obligations and responsibilities which a professional man assumes is that of absolute respect for the inviolability of the confidence reposed in him. Men go to others for professional advice because they need help, and it is often necessary for them to disclose matters which are personal to themselves, and which they would not disclose if it were not absolutely necessary to do so in order to get the help which they require.

And they have a right to expect that what they tell to their advisers will be respected as their individual property, and that it will not be unnecessarily divulged to others.

In no case is this true to a greater extent than in the relation between a physician and his patient. The information which a physician must obtain in order to treat his patient intelligently is in the highest degree of a personal nature. It involves facts which relate to the private and family history of the patient, and often to his private character and habits. It would be intolerable if the patient were not assured that he could safely impart everything to his physician and be absolutely secure against any danger that it would be revealed to others.

This is an old and sensible rule, both of law and of ethics, and, before a body of professional men, it is only necessary to state the rule as preliminary to what I have to say further on the subject.

It may, however, be a surprise to some persons to know that at common law a physician was not protected from disclosing, as a witness, information acquired by him professionally. The privilege was created by statute, which, however, has been in existence for many years.

But this privilege is purely personal to the patient. If he does not desire that his confidence be respected or that the information be kept secret, there is no reason in the world why the privilege should exist, especially in a case where the interest of the patient requires that it be waived.

This qualification of the general rule is sound in principle, and the courts of this and of other states have repeatedly and uniformly so held. There is no conflict of authority on this proposition.

It is not my intention to encumber what I have to say with the citation of numerous authorities, nor to enunciate any propositions which are not abundantly fortified by decisions. I will merely refer on this point to the language of the Supreme Court of the United States in Hunt v. Blackburn (128 U. S., 470), where it is said, with reference to the similar privilege between attorney and client:

> But the privilege is that of the client alone, and no rule prohibits the latter from divulging his own secrets, and, if the client has voluntarily waived the privilege, it cannot be insisted on to close the mouth of the attorney.

See, also, the language of Judge Andrews in 126 New York Reports, at page 455, where he says:

> By reasonable construction it (the statute) excludes a physician from giving testimony in a judicial proceeding in any form * * * involving a disclosure of confidential information acquired in attending a patient, *unless the seal of secrecy is removed by the patient himself.*

As I have already intimated, there are often cases where it is to the interest of the patient that he should not insist on secrecy on the part of his physician, and where it is even distinctly to his advantage that the seal of secrecy should be removed.

In cases where the question as to the patient's physical condition and past history are involved he may often be distinctly benefited by permitting the physician to tell what he knows. And the courts have uniformly held that no question of public policy is involved, so that the patient is free to do as he chooses about it. (See *Foley v. Royal Arcanum, 151 N. Y., pp. 196, 204.*)

Unless, therefore, there is some positive statutory prohibition, constitutional and properly enforceable, not based on considerations of public policy, which forbids the patient to waive the physician's privilege, it may be waived as often as the patient desires it, and for no other reason than because he does so desire. And in such case the physician is not only justified in telling what he knows, but it is his duty to do so.

If the privilege is personal to the patient, if it involves no question of public policy, and, if it is purely a creature of statute, it certainly follows that it should be competent for the patient to waive it in his own way and when and where he pleases, whenever it suits his pleasure or serves his convenience to do so.

Coming now to the history and present condition of legislation on the subject in this state, there was originally and for many years no statute permitting the waiver by the patient of the prohibition imposed by statute on the physician, but the courts held, nevertheless, that the waiver might be made. (*Johnson v. Johnson, 14 Wend., 637, 641, 642.*)

This fact is important, for it shows that the present restrictions upon the right of the patient to waive, to which I am about to refer, take away a right which originally existed independent of any statute.

The right to waive was first provided for by statute by section 836 of the Code of 1876, which read as follows:

> The last three sections (referring to the statutory provisions privileging testimony as to information received by physicians, clergymen and attorneys) apply to every examination of a person as a witness, unless the person confessing, the patient or the client, as the case requires, is present or represented by counsel and does not object to the testimony.

In 1877 the section was amended so as to read as follows:

> The last three sections apply to any examination of a person as a witness, unless the provisions thereof are expressly waived by the person confessing, the patient or the client.

The wording of the section in question so remained until 1891, and it was held by the Court of Appeals that, as it then stood, the patient might waive at any time, and the waiver would be effectual whenever thereafter produced. (*Foley v. Royal Arcanum, 151 N. Y., 196.*)

It is my contention that section 836 should have been allowed to remain as it was after the amendment of 1877 and as construed by the Foley case. The subsequent amendments of 1891 and of 1900, to which I am about to call attention, are inconsistent with the origin of, and reason for, the rule as to waiver, are clearly illogical and without good reason for existence, and the section should be restored so as to read as amended in 1877.

In 1891 an amendment was made to the section requiring the waiver to be made by the patient *upon the trial or examination.*

The lower courts construed this amendment as making no change in the effect of the section, and said that if the waiver was made by the patient at any time before the trial, and in anticipation of a possible trial, it was the same as if it were actually made upon the trial itself. But the Court of Appeals has recently upset this construction (*165 N. Y., 13*), and in 1899 the Legislature passed, and the Governor signed, an act which is still in force (*Chap. 53, Laws of 1899*) requiring that the patient's waiver must be made *in open court on the trial of the action or proceed-*

ing, and declaring that a paper executed by a party prior to the trial, providing for such waiver, shall be insufficient as such a waiver; but adding that the attorneys for the respective parties may stipulate for such waiver prior to the trial.

I do not hesitate to say that this last amendment was made without adequate or careful consideration, for reasons which were neither sufficient nor commendable, and that neither it nor the prior amendment of 1891 should continue to stand.

Now, what is the practical effect of the section as it stands amended at present, and to what extent is a patient now free to waive the personal privilege given him by section 834?

Where the patient or his representative is a party to the action and it is to his advantage to waive the privilege, it is, of course, possible for him to do so in open court on the trial, and to have the benefit of his physician's testimony. For example, in an action for damages for personal injuries, he can put his doctor on the stand and have him testify. But, if his controversy gets as far as a trial, he will never waive the benefit of the statute on the trial in favor of his adversary, and there is no possible way, so long as the amendments of 1891 and 1899 stand, by which the latter can avail himself of such testimony.

These amendments affect especially actions on policies of life insurance, where alleged breaches of warranty and misrepresentations as to the family history and physical condition of the insured are assigned as defenses to the action; and their effect is to make it practically impossible for a life insurance company to defend against a policy which has been fraudulently obtained by false statements as to these particulars. And there is no doubt but what the amendments referred to were made entirely with reference to that class of cases.

The physical condition and family history of the applicant is the fundamental question involved in this contract of life insurance. The contract is based on the assumption that the insured is in the average physical condition of persons of his age and class. While he is examined by a physician of the company to which he applies, there is often much about him which the company's examiner cannot ascertain from such examination as he is able to make, and as to which the examiner has to rely upon his answers to questions propounded. He and his own medical man know whether these answers are true—the company does not—and only has his word for it.

He usually, as part of his contract, signs a waiver of physician's privilege, and consents that any physician who has attended him may testify as to his physical history and condition, if it shall become material in a subsequent lawsuit.

The effect of these amendments is absolutely to nullify this waiver and consent, and to abrogate a vital and most important part of the contract of insurance—important to the insured, as well as to the insurer—for the waiver and consent enable him to get a better contract than he otherwise could get. Insurance companies are not in business for their health, and, if they cannot have the opportunity of proving the truth where they have been imposed on, they are sure to average up the loss thereby entailed by making all insurance more expensive in other ways.

The amendments practically make all life insurance contracts incontestable as to their most important features. They take away from this class of contracts the right of one party to contest them for fraud, even of the grossest character, which exists as to all other classes of contracts—for there is no way of proving the facts, except by medical testimony.

It is all right for companies to issue incontestable policies if they and their patrons wish them, but it is not right for the law to *compel* both parties to make their contract incontestable for fraud, which is the result produced by the amendments. The insured is dead when the policy falls due, and cannot make the waiver on the trial. Human nature has not yet reached that stage of altruism where the beneficiary will voluntarily waive the privilege on the trial.

I am quite aware that it is sometimes claimed that life insurance companies insert specious and misleading provisions and waivers in their contracts which entrap unwary and illiterate applicants for insurance by inducing them to warrant the truth of a multitude of answers as to unimportant facts of physical history, and that the amendments in question properly deprive the companies of all opportunity to prove the falsity of such answers.

There are several answers to this assertion. In the first place, it never pays a life insurance company in dollars and cents to contest a policy, and it is nearly always done with reluctance and from sense of duty. In the second place, actions of this character are among the most difficult to defend successfully, even under the most favorable circumstances, as I know by long experience.

Further than this, the records of the companies show that the number of policies contested, compared with those paid promptly and without contest, is infinitesimal.

And, finally, it does seem as if life insurance companies should not be the only litigants on God's green earth who are absolutely shut out by statute from the right to prove fraud in contracts to which they are parties.

The amendments are an arbitrary restriction upon the right of individuals to contract as they please, with regard to their private affairs. And, although the courts have not yet passed on the point, I greatly doubt whether the restrictions in question are not unconstitutional as impairing the right of contract.

The Boston Medical and Surgical Journal, in a recent number, contains a discussion of this subject, in which the writer declares that the suppression of medical evidence in the State of New York, as provided by existing statutes, is absurd, and that it embarrasses the administration of justice and puts a premium on artifice, rascality and fraud.

The writer proceeds as follows:

> Without adverting to any of the numerous recorded instances in which this law has caused mischief, I will cite in illustration the criticism of O. A. Boston, Esq., the well-known writer on forensic medicine: "The law in New York formerly cut off the safest means of ascertaining the mental condition and competency of a testator; it now precludes a physician from disclosing the condition of his patient, who is a lunatic or habitual drunkard; it shuts out much testimony tending to show fraud in insurance cases; it precludes a physician from stating the cause of his patient's death, though there is no longer any secrecy connected with it, for the law renders it the duty of the physician to make, for filing with the local board of health, a certificate of the probable cause of the death of a patient."
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> In a paper read before the Medico-Legal Society, giving in detail some of the preposterous results obtained under this law, Albert Bach, Esq., says: "I am convinced that with very rare exceptions, so rare, indeed, as not to weigh in the balance of justice, it is against public policy to prohibit the giving of such evidence, and that greater evils result from its rejection than from its admission."

And the writer calls attention further to the following language of Judge Earl in Renehan v. Dennin (103 N. Y., 580), a case involving the construction of sections 834 and 836:

> It is probable that the statute, as we feel obliged to construe it, will work considerable mischief; in testamentary cases where the contest relates to the competency of the testator it will exclude evidence of physicians, which is generally the most decisive and important. In cases upon policies of life insurance, where the inquiry relates to the health and physical condition of the insured, it will exclude the most reliable and vital evidence which is absolutely needed for the ends of justice. But the remedy is with the Legislature and not with the courts.

The amendments of 1891 and 1899 should be promptly repealed, and section 836 should be restored in this particular, as it was amended in 1877, so as to enable the parties to waive the physician's privilege when and as they please, and to give due effect to their contracts as made. To enforce the amendments referred to enables the beneficiary to repudiate a material part of his contract unfavorable to himself, while retaining the benefit of that part which is to his advantage. This is unconscionable and immoral, for he has obtained a better contract by reason of the waiver which it contains than he otherwise would have had, and the law should give effect to all parts of the contract. The amendments do away by an arbitrary statute, having no sound reason to uphold it, with an inherent right which existed independent of any statute. The amendment made to the section in 1892 as to attorneys who are witnesses to a will, and that made in 1893 as to evidence in damage cases, seem to be unobjectionable.

This paper is not intended as a special plea for the life insurance companies. They are quite capable of taking care of themselves.

I have aimed simply to call attention to what seems to me to be a gross and senseless injustice in the present provisions of the Code on this subject, as I have found it to exist in my own practice.

For the ANNALS.

THE VALUE OF AN OCCASIONAL CONVULSION IN CERTAIN CASES.

BY WILLIAM P. SPRATLING, M. D.,

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It is hard to imagine anything more contradictory on its face than to say that a convulsion could ever be of value; yet I am convinced that such is sometimes the case, for two classes of individuals have come under my observation in which occasional convulsions were productive of good. The first includes epileptics in which prolonged periods of mental disturbance or insanity are prevented through the occurrence of a fit; the second, selected cases of insipient alcoholism in which a persistence in the drinking habit would probably lead to confirmed epilepsy, were it not for the emphatic warning given by the convulsion.

Epileptics of a certain type make up the first class, and includes those in which the disease seems dependent on fluctuating internal causes; on the action of certain toxines as yet unisolated, and but little understood, and which grow in intensity until a limit is reached, when their toxicity is in some manner neutralized or destroyed by a convulsion, only to repeat again and again the same process of development, growth and decadence, the latter occurring each time as the result of one or more epileptic convulsions. These periods of exacerbation are not, as a rule, fixed in time, although I have seen a few cases in which there seemed to be some evidence of periodicity.

Epilepsy generally manifests itself by a sudden and more or less appreciable discharge of nervous energy in some part of the brain, and we know that experimental epilepsy may be produced in the lower animals in various ways, as, for instance, by the application of electricity to the brain cortex, and by introducing certain substances into the circulation, such as ammonium carbammate, alcohol and other toxic fluids. Now the action of toxic substances introduced from without is not essentially different from those produced within, and, relatively, they are of importance to the individual only in so far as he may or may not have power of control over them. In the former cases, those in which toxic agencies are introduced from without, his control over them may reasonably be assumed to be absolute, *i. e.,* he may introduce them or not, just as he chooses; while in the latter, in the case of agencies having a like action and generated within, he may or may not be able to prevent their origin.

When a man who is well along in years begins to drink and has a convulsion as the result, he had better let alcohol alone at once, for that convulsion meant an emphatic protest on the part of the brain that it cannot be subjected to such evil influences without the risk of pronounced injury to the general welfare of the individual. All amateur alcoholics would not have such a warning, and only those who suffer a constitutional loss of resistance on the part of the nervous system to the action of alcohol, especially need it, and such individuals ought to admire the wisdom of Nature in providing it.

In some cases, perhaps in most of them, a convulsion, after all, may be regarded as only a protest on the part of Nature against the presence of an irritant of some kind in a part of the body where it ought not to be, and it only remains for science to locate and determine the nature of the irritant.

A man of 40—the exponent of an eminent calling—an athlete in proportion, strong, vigorous, robust, and in every respect the picture of health, consulted me some five years ago for what he called "fainting spells." A thorough examination of his condition left me at a loss at first to account for his convulsions, but on close questioning he shortly admitted occasional over-indulgence in strong drink at times when "good fellowship was being put to the test." I warned him earnestly; told him that as often as he applied the match, just so often would the powder probably explode; but he was unable at first to quit the practice, and about every two months, for a period of two years, he would have one and sometimes two well marked convulsions after his periods of dissipation. Finally—being a man who often spoke in public—he had a very marked convulsion in a place and manner that embarrassed him exceedingly, but which had the salutary effect of bringing him to his senses, for after that he submitted to proper treatment, abstained from further indulgence in alcoholic drink, and for three years now has not had a convulsion. This man stood in danger of sooner or later becoming a confirmed epileptic; not because there was any distinctive cause in his condition capable in itself of producing epilepsy; but because there was in him an inherent tendency to convulsions which would only appear under proper excitation, and which being forced to appear a sufficient number of times would give rise to a condition that might continue to create them independent of the action of an immediate excitant.

Such convulsions, once established, are termed "Habit Epilepsy," and they express conclusively the power of education possessed by the central nervous system.

In the second class of cases in which an occasional convulsion helps to preserve the mental life of the patient, it is far more difficult to determine and remove the cause. In many of them the convulsion seems to come as the termination of an obscure autotoxic cycle that varies in duration in different individuals and that bears some similarity, in its upward period, at least, to the "Folie Circulaire" or the Circular Insanity of the French. It seems evident that the specific cause of the fit in these cases is something that permeates the entire organism; something that comes and goes, causing a sort of Psychic tide that rises and falls; that grows and develops in intensity, exerting a pernicious influence on the daily life of the patient by making him do and say things not in harmony with his normal state, which abnormalities the patient will exhibit in proportion to his powers of inhibition, until the limit is reached and the mind loses its direction and control. The powers of further inhibition finally being destroyed, the nervous storm breaks with great force and violence, the poison is neutralized or destroyed, equilibrium is restored, and all is quiet and serene once more.

A fairly typical illustration of this class, in her own language by E. M., an intelligent woman of 43, and now a patient at the Craig Colony, is of interest.

"This is now the 22nd of February, 1902. I had four very severe attacks on the 31st of last January. I felt the attacks coming for a long time before they came. I was exceedingly nervous and irritable; things did not go right. I scolded about everything and was unable to hold things in a proper manner. When I picked up my brush and comb I would drop them, and when I walked I stepped crooked—one foot would keep making mistakes, and I didn't know which foot it was. They said it was the left. I could not sleep at all. I lay thinking of things that had happened and that were not pleasant. I tried to put them out of my mind by thinking of what I had read. I like history and I tried to think of some character in English history about which I had read. I have a strong will and feel that I can control my thought at most times, but for days before the attacks come on I am unable to do so. They go off about everything and I try to make them come back but they won't. They get worse every day and night and finally they all get jumbled up together and I don't know anything. Then the attacks come on and after that I am all right—everything clears up and I see things as they really are. I lose all my nervousness and can act naturally."

The same psychic phenomena are witnessed in insane epileptics, who are prone to show indications of an approaching seizure. "In asylum life," says Bevan Lewis, "amongst the intelligent class of nurses the fact is universally recognized that a premonitory stage of great irritability is often seen, and the effect of a convulsive attack will be to clear up the mental atmosphere." In our experience, delusions, hallucinations and illusions are very rare in the average epileptic, sane or insane, during the inter-paroxysmal period, but are more common during the pre-paroxysmal stage, nearly always disappearing with the fit. Personally, I come in contact with large numbers of epileptics at regular times each week, and it is easy to detect psychic evidences of an oncoming attack, in many cases days and even weeks before the attack occurs. Such cases would seem to offer an inviting field in which the comparative study of living matter in the most comprehensive manner, during, as well as between, the periods of disturbance that culminate in convulsions, might be pursued to advantage; and especially do they emphasize the necessity for studying and treating the epileptic *strictly on an individual basis.*

Nor is it enough now to speak simply of epilepsy, for our knowledge of its manifold types and causes would seem to require that we make every effort to be more specific, and define which one of the epilepsies we may have under consideration.

Editorial

> In 1736 I lost one of my sons, a fine boy of four years old, by the small-pox, taken in the common way. I long regretted bitterly and still regret that I had not given it to him by inoculation. This I mention for the sake of parents who omit that operation, on the supposition that they should never forgive themselves if a child died under it; my example showing that the regret may be the same either way, and that, therefore, the safer should be chosen.
>
> BENJAMIN FRANKLIN.
>
> *Autobiography.*

New York State Department of Health Antitoxin Laboratory

This laboratory was authorized under Chapter 345, Laws of 1901, for "the manufacture and standardization of tetanus, streptococcus and diphtheria antitoxin, and for further investigations of serum therapy in tuberculosis, typhoid fever and kindred diseases." Dr. H. S. Pease was appointed Director of the Laboratory in the summer of 1901, and the staff has since been augmented by the appointment of Dr. Charles S. Witbeck, as assistant bacteriologist. Construction of stables and laboratory quarters was commenced October 1st. The State Department of Health made an arrangement with the trustees of the Bender Hygienic Laboratory whereby the laboratory part of the work could be carried on in that institution. This greatly facilitated the early establishment of the work. The laboratory now has at its disposal two general laboratory rooms, a practically dust-proof inoculating room, an incubator room and an office which are conveniently arranged and specially fitted for present needs. The animal house is located on Yates street, a few blocks from the laboratory. The building was formerly a private stable. The whole building was thoroughly drained, and the plumbing, roofing and woodwork were overhauled. A part of the carriage house was fitted up as an operating room and an isolation ward constructed. The capacity is fifteen large animals. This gives the State one of the most hygienic stables in the country.

Practical and financial considerations made it impossible to work on all lines at the outset so work began on the production of diphtheria antitoxin in order that its details might be well settled before beginning the more difficult task of producing the antitoxin for tetanus. Up to January 1st, 1902, considerable amounts of the diphtheria poison were produced and injected into fifteen horses. Trial tests indicated that the laboratory would be able to place at the disposal of the State Department of Health enough antitoxin to supply the needs of the various State medical, charitable and penal institutions in the month of February, and shortly afterward to supply those entitled to receive the same under the ruling of the Department. All the antitoxin is to be submitted to the most rigid tests for purity and antitoxic strength by the director in person. It is expected to begin work upon the production of antitoxin for tetanus during the month of January. The report dwells upon the value of antitoxin in the treatment of diphtheria and shows that since antitoxin came into more or less general use there has been an annual average saving of life from diphtheria at the rate of twenty persons for every thousand deaths from all causes.

It deplores the fact that the use of diphtheria antitoxin as a preventative is not as wide spread as it should be. The value and use of tetanus antitoxin is discussed and the director states that its greatest value lies in its ability to prevent the diseases in all cases of wounds where infection with the tetanus organism is a possibility. The production of effective antitoxins for tuberculosis, typhoid fever and various other diseases has not yet been accomplished. Much work is being done along these lines and this laboratory will endeavor in so far as its facilities may permit, to participate in such investigations.

The possible earning, or rather saving, power of such a laboratory is illustrated by the results of the Massachusetts Laboratory for the year ending March 31, 1901. 53,389 bottles were distributed, which at retail prices would cost $146,810.75. This was accomplished at a total cost of less than $15,000.

The State support and control of these laboratories permits the work to be carried on with the utmost freedom from secrecy and enables members of the medical profession to become familiar with the advances along these lines of scientific research.

The State Hospital for Crippled Children

The first annual report of the New York State Hospital for the Care of Crippled and Deformed Children has just been issued, covering the ten months ending September 30th, 1901.

The hospital is located at Tarrytown, N. Y., and the Board of Managers fear that the location may mislead both the profession and the laity into believing that it is a local institution. They desire particularly to call attention to the fact that, as the name indicates, it is essentially for the whole State, and that applicants from New York County are constantly refused admission, in order to leave room for those from the State at large. The hospital was established by act of Legislature in 1900 "for the care and treatment of any indigent children who may have resided in the State of New York for not less than one year, who are crippled or deformed, or are suffering from a disease from which they are likely to become so." The applicant must give satisfactory proof by affidavit that he is unable to pay for private treatment, and must bring with him from the physician who has previously attended him a history of the case and statement of the patient's condition.

Applicants must be between the ages of four and sixteen years, and all applications will be acted upon in the order of their reception. No patient in immediate danger of death, or whose condition precludes a reasonable amount of relief as the result of treatment will be admitted. Patients residing at remote points in the State are referred to the following gentlemen (out of town members of the consulting staff): Dr. A. Vander Veer and Dr. S. B. Ward, of Albany, N. Y.; Dr. Louis A. Weigel, Rochester, N. Y.; Dr. Roswell Park and Dr. Charles G. Stockton, Buffalo, N. Y.; Dr. Richard B. Coutant, Tarryown, N. Y.; Dr. J. Van Duyn and Henry L. Elsner, Syracuse, N. Y.

During the ten months covered by this report 24 patients were admitted, 13 suffering from hip joint disease, 5 from spinal disease, 3 from infantile paralysis, and one each from knee joint disease, club foot and rachitic curvature of the spine. Five of these have been discharged, cured or greatly improved.

Of the 38 applicants who were rejected, 25 were eligible for admission, from which the Board argue that it is desirable to increase the size of the hospital at the earliest possible moment. A strong point in favor of the usefulness of the institution is its location in the country instead of the city, and it is the intention of the managers at the earliest possible moment to increase the grounds surrounding the hospital from four acres to fifty in order to give the little ones still further opportunities for exercise in the open air. Evidently the instituiton has a large field of usefulness and deserves every encouragement.

A Proposed Psycho-Physical Laboratory at Washington

The ANNALS has received the following circular from Dr. Arthur Mac Donald of Washington, D. C., setting forth his reasons for the institution of a psycho-physical laboratory in that city. Papers accompanying the circular show that many of the professors of psychology, ethics, anthropology, moral philology, political economy, sociology, etc., and specialties in nervous and mental diseases in this country and abroad are in favor of such a laboratory.

A rigid and patient study of man must be based primarily upon the individual who is the unit in society. If trustworthy knowledge is to be obtained, it must come from the study of large numbers of individuals. The most recent and best method of investigation is that of the laboratory with instruments of precision in connection with sociological and abnormal data.

Such a laboratory is not in the least to be in competition with other psycho-physical laboratories in our country. Its purpose is to gather sociological, pathological or abnormal data, as found especially in *children*, and in criminal, pauper and defective classes and in hospitals. Besides these data it is desired to gather more special data with laboratory instruments of precision and to make such experiments or measurements as are generally considered of value not only by psycho-physicists, and anthropologists, but by physiological and pathological specialists. While the field is necessarily a very large one, the purpose is to study in those parts of it which seem at the time to be productive of the most practical results. To gather a large number of such data concerning a large number of individuals, to compute and tabulate concerning a large number of individuals, and to compute and tabulate and publish the results could not easily be undertaken by an individual or by a university, because of the expense necessarily involved. The university prepares men for work, but does not carry it on.

It is also desirable that the results of similar work in this country and Europe be collected, compared and published from time to time. If we are ever to have sufficient definite knowledge of living human beings to become a *science*, it can only be done by the careful study of large numbers of individuals. The more thorough the study and the larger the number, the more useful such investigation can be made to society. We pay out millions to catch, try and care for criminals, but give very little to study the causes that lead to crime.

The study of man, to be of most utility, must be directed *first* to the *causes* of crime, pauperism, alcoholism and other forms of abnormality. To do this the individuals themselves must be studied. As the seeds of evil are usually sown in childhood and youth, it is here that all investigaton should commence, for there is little hope of making the world better if we do not see the causes of social evils at their beginnings.

In connection with the circular is the following resolution which Dr. Mac Donald desires the leading medical societies to consider:—*Resolved:* That we are in favor of the establishment of a psycho-physical laboratory in the Department of the Interior at Washington for the practical application of physiological psychology to sociological and abnormal or pathological data, especially as found in institutions for the criminal, pauper and defective classes and in hospitals and also, as may be observed, in schools and other institutions.

Scientific Review

THE PRESENT POSITION OF THE BACTERIOLOGY OF ACUTE RHEUMATIC FEVER.

The title of this paper obviously presupposes the bacterial etiology of acute, articular rheumatism as granted. It, therefore, seems unnecessary to develop a theme involving a consideration of the many points of analogy in the pathogenesis of this disease and many other infectious processes, the bacterial excitants of which have been convincingly demonstrated. Nor does it seem necessary to resurrect the more primitive notions advanced concerning the etiology of this infection. The theories of Cullen and Mitchell and of those closely following them may be interpreted as historical expressions of a more imaginative age.

In looking through the literature relating to the etiology of this disease in the earlier decades of bacteriology, one can hardly fail to be impressed with the little heed given to the bacterial conception of rheumatic fever, but hand in hand with the investigations latterly made upon infectious processes generally, the significance of the findings in this disease has grown in interest and prominence. Thus, in a paper read at a meeting of the British Medical Association in 1887, Dr. A. Mantle[1] brought forward with considerable emphasis the view previously touched upon by several continental writers that acute rheumatic fever is an infectious disease. In his paper, he advanced views supporting and explaining his contention. In his own words, "it was with fear and trembling" that he advanced the theory; so radical even at that time, did the view seem. But shortly after this time the view spread more widely, so that, in 1895 many bacteriologists and physicians looked upon the question as one of merely time for its settling. The great stumbling-block in the chain of evidence relating to this belief has been the varying results obtained at different times by several investigators who studied the disease from its bacteriological aspects.

So early as 1875, Klebs[2] had demonstrated micro-organisms in the cardiac valves which he thought were different from those observed in ordinary casss of malignant endocarditis. In 1887 Popuff[3] obtained cocci from the blood of a rheumatic fever patient which on intravenous injections into rabbits induced arthritis, endocarditis and pericarditis. Whether the coccus which he isolated was similar to the ordinary streptococcus or not is difficult to say owing to the lack of details. Since then a number of other investigators have restudied the subject from the same side, but with very discordant results.

As the question now stands the different views of the bacterial etiology of the disease may conveniently be grouped under four main headings:

First, that there is a specific excitant and that this is a diplococcus which has been repeatedly isolated from the lesions of the disease. The findings of those who take this view have had significant claims in the bacterial conception of the disease. Those who have contributed most to this view of the question are Wesphal, Wassermann and Malkoff,[4] Poynton and Payne,[5] and still more recently, Fitz-Meyer.[6]

The second view assumes that the infection is a bacillary one with an anærobic bacillus, and is chiefly supported by the investigations of Achalme,[7] Thiroloix,[8] Bettencourt[9] and the Russian bacteriologists, Savtshenko[10] and Melkich[11].

Third, yet another view maintains that simple uncomplicated rheumatism which reacts to salicylates is induced by some unknown virus and that the complications are the result of secondary infections, usually with cocci.

Finally, a fourth class of investigators contend that the rheumatic infection is not specific, in the sense that one organism alone is concerned in the development of the disease. Gustav Singer,[12] who is the chief supporter of this view, believes that it is the result of infection with miscellaneous bacteria, but mainly with pyococcal forms, especially streptococcus pyogenes and the staphylococcus. He maintains that the disease is a modified form of pyæmia, the result of infection with organisms of attenuated virulence.

The Diplococcus as the Specific Excitant.

In 1894, Dana[13] isolated such cocci from a case of chorea following rheumatism, and again, in 1898, Truboulet and Apert[14] isolated a diplococcus from 11 cases of acute articular rheumatism. In only one instance did they isolate this organism from the blood and with it they induced in rabbits valvular inflammation of the heart. Notwithstanding the fact that no arthritic symptoms followed, they considered the diplococcus as an important factor in their cases.

The following year—1899—another interesting study was made by Wesphal, Wassermann and Malkoff,[15] who succeeded in isolating a diplococcus from a case of severe rheumatic fever associated with chorea. The coccus induced polyarthritis in rabbits that had been inoculated intravenously. The inoculation results were uniformly constant in a series of eighty rabbits. The organism which they described was grown on a medium of high alkalescence and did not thrive on ordinary media. They regarded their organism as specific.

Finally, Poynton and Paine[16] again took up the study in a series of twelve successive cases, the results of their work being published in 1900. They isolated a coccus from the blood, tonsils and urine of the living subjects and also from the pericardial and cardaic lesions after death. By animal inoculations they also induced polyarthritis, valvulitis, pericarditis and symptoms which they considered characteristic of chorea. The lesions were non-suppurative. The bacteria described also induced coagulation necrosis of the kidney and liver. In the different complicating lesions of the animals, they found the original inoculated diplococcus. The disease process which followed the rabbit inoculations developed to a certain point and then recovery usually occurred, unless the dose had been extraordinarily large. When death occurred this was especially attributed to inflammation of the thoracic organs. The heart in these cases was usually found dilated and fatty. In all inoculated animals the fever was moderate, and the clinical symptoms were remarkably constant when the diplococcus was inoculated from animal to animal. The organism described by Poynton and Paine is a very small coccus occurring chiefly with the diplococcus arrangement, each individual organism scarcely measuring over five-tenths of a micron in diameter. Whilst these observers were able to cultivate it on different media, experience showed that a slightly acid medium was most suitable, this being quite the reverse of the experience of Wassermann. From three of their human cases they cultivated the diplococcus from pericardial exudates; and the exudates in each case were acid in reaction. The best results were obtained by anærobic cultivation with a mixture of milk and bouillon acidified by lactic acid. Unfortunately, they do not state the degree of acidity which they considered best for purposes of cultivation. Under these conditions of artificial growth, the coccus grew mainly in chains. It evidently was not a strict anærobe, for they were able to cultivate it upon coagulated blood serum and simple agar with free access of air. When grown under these conditions, the arrangement was mainly in groups. When cultivated upon agar-agar it soon lost its virulence and characteristic morphology.

The demonstration of the organism in human tissues was attended with considerable difficulty, partly from the smallness of size and in part from the fewness of the attempts, owing to the scarcity of material for study. They also believe that the organisms are rapidly destroyed in the lesions, this being more true of rheumatic valvulitis, in which lesion the demonstration of the organism was especially difficult. Their advice is that the organism be looked for particularly in the areolar tissue of the valve rather than in the necrosed portion of the vegetation or in the regions of slight proliferation. Similarly with the rheumatic nodule, the organs were found more easily in the outer zone than in the areas of necrosis. On the other hand, they were demonstrated with less difficulty in recent pericardial exudates.

In their most recent communication (1901) to the London Pathological Society, Poynton and Paine restated their previous main conclusions, based now on the study of eighteen cases, from all of which they isolated the same minute diplococcus. They feel convinced that the organism is identical with the one described by Thiroloix and later by Wassermann, and since their first report, again by Fritz-Meyer.

Meyer, in the early part of 1901[17] presented a report of a study of the joint exudates and tonsils in several cases of acute articular rheumatism. From the joints, he had been unable to isolate any organism, but from the mucus covering the tonsils, he succeeded in cultivating a diplococcus which grew in chain formation and which excited in animals peculiar joint lesions resembling those of rheumatism. The diplococci he considered probably similar to those described by Wassermann, but not wholly identical. He reached the conclusion that this organism was present in the tonsils of rheumatic cases only, and that it induced seropurulent, but usually sterile exudates in the joints, which did not proceed from sepsis; that the bacteria have a peculiar affinity to the serous membranes and endocardium in particular; and that this makes it probable that they have an etiological relationship to acute, articular rheumatism. In his remarks, he states that this is certainly one of the most important bacterial factors, but whether the only one he queries.

About the same time last year Menzer[18] studied two cases of acute articular rheumatism, from the joint exudates of which he isolated streptococci. He also isolated the same organism from the interior of the tonsil in three other cases. The streptococcus isolated induced joint and heart complications in the inoculated animals. Menzer queries if the streptococcus isolated by Wassermann and Malkoff is any different from his organism, which he considers analogous to the ordinary pyogenic streptococcus. The conclusion which he reaches is similar to that urged by Singer. It will be remembered that Singer's contention is that the disease is attributable to pyococcal forms generally.

The most important point about the investigations of the authors named is that the cocci isolated tend to produce joint and heart complications in the inoculated animals.

In a communication before the New York Academy of Medicine (1901), Dr. Brill reported a case of rheumatism from which Dr. Libmann isolated a streptococcus from the blood after five successive attempts. The isolated organism was inoculated into three rabbits, in two of which no lesions were found at autopsy, and in the third a single vegetation in the chordæ tendineæ. In discussing the identity of this organism with Dr. Libmann, he assured me of his conviction that it was probably an ordinary streptococcus.

Singer[19] last year reported the results of investigations of seven cases of acute articular rheumatism, two of which were associated with chorea. In five, streptococci were isolated; and in two others, staphylococci. After reviewing the literature, he reiterates his previous conclusions, that pyogenic bacteria are the excitants of the disease, particularly the streptococcus.

Finally, the most recent paper upon this subject is a report by Predtetshenski[20], who studied five cases with the specific object of isolating, if possible, Achalme's bacillus or Wassermann's diplococcus. In none of the cases did he succeed in finding Achalme's bacillus, and in three of the cases no bacterial growth was obtained. From the two remaining cases, however, he succeeded in obtaining cocci which closely resemble the organisms described by Wassermann and Poynton and Paine. Ten or fifteen days after animal inoculations, painful swellings of the large leg joints developed, associated with fever and loss of weight, and finally, death occurred. The autopsy of the animals showed marked inflammatory changes about the joints, with a slight amount of turbid fluid within them. Apparently, from the description which he gives, guinea-pigs alone were susceptible to the cocci, whereas the organisms were practically non-pathogenic for rabbits. This is very contrary to the experience of most of the other investigators who found cocci in this class of cases.

An Anaerobic Bacillus as the Specific Excitant.—According to Achalme and several others, the important bacterial excitant of acute articular rheumatism is not a diplococcus, but an anaerobic bacillus having the general morphology of the anthrax organism, which he isolated from nine cases of the disease. It grew best on a mixture of milk and broth; and inoculations induced sanious exudations at the sites of inoculation. In some of the cases death occurred from septicaemia.

Later studies by Thiroloix confirmed these observations, and he, moreover, succeeded in inducing symptoms in rabbits simulating those of rheumatic fever. Later, these investigations were again confirmed by Bettencourt; and Dr. Hewelett, last year (1901), in a discussion on rheumatism before the Chelsea Clinical Society, stated that he had isolated an organism from the only fatal case of rheumatic fever he had investigated which resembled Achalme's bacillus.

Foullerton[21], in a discussion following the presentation of a paper by Poynton and Paine, stated that he was convinced that Achalme's bacillus was probably identical with the bacillus enteritidis sporogenes of Klein; and Dr. Rist[22], on the same occasion, stated that Achalme's bacillus had repeatedly been found under a variety of other conditions, normal and pathogenic. The spores of this organism, he stated, may be found in milk which has not been sterilized for a sufficient time. This, he fancied, was the source of Achalme's bacillus; and Achalme's findings really amounted to an error in technique.

This review sums up the most recent and important literature on bacteriological investigations into the nature of acute articular rheumatism. If the statement of Dr. Rist be true, that Achalme's bacillus has been found under a variety of normal and pathogenic conditions, then, of course, the contention of Achalme and his followers falls to the ground. On the other hand, if this be not so the position of those who contend that this anaerobic bacillus is the specific excitant is clear; and it only remains for further research to settle the specific nature of this organism. The negative results with reference to this organism of Wassermann, Poynton and Paine, and Predtetshenski and my own researches are indeed significant, especially when taken in connection with the statement that this bacillus may be found under a variety of unrelated conditions.

The view supported with so much vigor by Singer[23] in his recent paper, that acute articular rheumatism is not a clinical entity, but merely a modified form of pyaemia mainly attributable to pyococci, has a number or supporters. He criticises the claim brought forward by Wassermann and Malkoff that the high alkalescence of the medium which they used is of any diagnostic significance, and points out that a highly alkaline medium had been shown by Lingelsheim to be suitable to the streptococcus pyogenes and that this organism will grow in very various media. The diplococcus Wassermann and Malkoff described, he maintains, to be none other than common streptococcus pyogenes. In criticising the experimental results of their studies, he brings out the fact that Wassermann obtained periarthritis, and Fritz-Meyer, sanious exudates. He, moreover, contends that the uniform development of polyarthritis in a series of rabbits is proof that the disease produced is not really rheumatic in nature, for this is quite at variance with the clinical history of rheumatic fever, in which polyarthritis is only an occasional occurrence. He maintains, further, that any of the results obtained might be induced by the common streptococcus. This has been our argument, which those claiming the specificity of their diplococci have not been able to satisfactorily meet.

Of considerable significance in connection with the autopsies on the inoculated animals, are the statements of Foullerton[24] and Bakenham[25]. Foullerton stated that shortly after the appearance of the work of Poynton and Paine, the hearts of all rabbits killed or dying in his own laboratory were examined and he had been much impressed with the fact that two of the first nine animals examined showed well-marked vegetations in the left heart. Bakenham corroborated this statement, saying that in his experience one out of ten rabbits usually showed vegetations in the heart. If this is so, of course, significance of the inoculation results with the diploccoccus becomes less.

In summing up the main points of the present position of the bacteriology of acute articular rheumatism, I shall formulate the following conclusions:

1. Acute articular rheumatism is an infectious disease very probably induced by a specific bacterial excitant.

2. The claims of Achalme and others that the infection is attributable to an anaerobic bacillus have not been sustained and are very probably untenable.

3. The correctness of the contention advanced by Singer, that the disease is a modified pyaemia is very doubtful. It is probably much safer to say that secondary infection with pyococcal bacteria is common in this disease.

4. The diplococcus isolated by Wassermann, Poynton and Paine and several others is probably a modified streptococcus. All of the inoculation results induced by this assumed specific diplococcus may be obtained with the streptococcus pyogenes. The demonstration of this organism then as the causative factor of rheumatic fever is incomplete.

5. The specific bacterial excitant of the disease still remains to be discovered.

AUGUSTUS JEROME LARTIGAU.

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In Memoriam

Theodore W. Nellis, M. D.

After a long illness, borne with true Christian fortitude, Dr. Theodore W. Nellis passed away April 14, 1902, at his home, No. 210 State street, Albany, N. Y. Dr. Nellis was born in Schoharie, April 13, 1851, and educated at the Schoharie academy. In the year 1871 he established a drug business in Albany which was conducted under the name of J. Nellis & Son. In 1876 this was dissolved. In 1881 Dr. Nellis established the present business, which is caried on at No. 75 State street. Dr. Nellis was a graduate of the Albany Medical College of the class of 1881, and was a member of the Albany County Medical Society. He was a prominent Mason, being a member of Wadsworth Lodge No. 472, F. and A. M. Interment was at Schoharie.

Dr. Nellis was a loyal alumnus of the Albany Medical College and years ago founded the prize, consisting of a case of surgical instruments, which is awarded annually to the senior student passing the best final examination. In his business he had developed the special department of physicians' supplies, and was thus thrown constantly in relation with practitioners of Albany and the surrounding country. His invariable affability and courtesy made these physicains his friends; he was helpful and cordial, accurate in his knowledge of his business, and thus attached himself to all who had occasion to meet him.

James Patterson Kimball, M. D.

Dr. Kimball died at Onteora-in-the-Catskills (Tannersville), N. Y., April 19, 1902. At the time of his death Dr. Kimball had attained the rank of Colonel and Assistant Surgeon-General, United States Army (retired). He graduated from the Albany Medical College in 1864, and was attached to the college. A proper biographical sketch will be published in a later issue of the Annals.

Meredith Clymer, M. D.

Dr. Clymer, who died in New York city on April 20, had been so long retired from the activities of his profession that his name is little more than a memory to its younger members. He belonged to the old school of physicians, and was a contemporary of Willard Parker, the elder Flint, Peaslee and Hamilton. Born in Philadelphia in 1816, a grandson of George Clymer, one of the signers of the Declaration of Independence, he was graduated from the University of Pennsylvania in 1835, and from its medical department in 1837. After some years spent in study in European capitals he settled in Philadelphia, where he remained for ten years, holding several professorial chairs in that city. In 1851 he removed to New York and became professor of practice in the University of New York. During the Civil War he served as Surgeon U. S. Volunteers, and as Medical Director of the Department of the South. He was the American editor of Aitken's great work on practice, and a voluminous contributor to medical literature and particularly in his specialty of nervous diseases.

Dr. Clymer will be remembered by many Albanians as Professor of Diseases of the Nervous System and of the Mind in the Albany Medical College during the years 1870–1874. He was a man of striking appearance and elegant manners, and the writer of this note well remembers the first course of lectures which he delivered in Albany, and which, as a medical student, he attended. His manner was forceful, alert, direct, and, at times, impatient. He was of good stature, portly, always faultlessly attired, and his glance keen and penetrating. His lectures, which were read from manuscript, were carefully prepared, delivered in a rather formal manner, and were perhaps somewhat beyond the entire comprehension of the average member of the classes he addressed. He did little to encourage communication between himself and his hearers other than that which the delivery of his lectures afforded, but he was universally respected by the students who sat under him, for they fully recognized his ability. He will be long remembered by those whose privilege it was to know him as an old-time gentleman, educated and refined; a man of distinguished ability and essentially a student, who did good work in his day and generation, and contributed largely to the advancement of the profession which for so long a period he adorned. W. G. T.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, MARCH, 1902

Deaths

	1902	1901		1902	1901
Consumption	18	29	Seventy years and over	22	26
Typhoid fever	2	1	One year and under	7	27
Diphtheria	1	2	Albany City Hospital	9	9
La Grippe	1	10	St. Peter's Hospital	6	3
Smallpox	1	0	Homeopathic Hospital	0	3
Pneumonia	17	18	County House	4	3
Broncho-Pneumonia	1	10	Penitentiary	1	0
Apoplexy	8	9	Little Sisters of the Poor	1	2
Bright's disease	12	9	Albany Orphan Asylum	0	2
Cancer	11	9	Public Places	4	0
Accidents and violence	6	4			

Total number of deaths for March, 1902, 120; deaths less non-residents dying in institutions, 104.

Death rate for March, 1902, 13.57; death rate less non-residents, 11.88.

Total number of deaths March, 1901, 164; death rate March, 1901, 18.55.

Births reported ....132 *Marriages reported* 34

WORK OF HEALTH PHYSICIANS

Total number of new assignments made during the month of March.... 57
Total number of calls made..359

BENDER LABORATORY REPORT ON DIPHTHERIA TESTS

Initial positive	Initial negative	Release positive	Release negative
9	26	22	19

Total number of cultures........76

INSPECTIONS

During the month of March there were 297 sanitary inspections made, mostly of houses in the flooded district. One hundred and forty-six of these were without cause. There were found and condemned 68 privies, 11 closets, 10 drains, 5 plumbing nuisances, 7 water nuisances, 9 filthy yards, 1 filthy alley, 2 filthy vacant lots, 173 filthy premises, 2 manure nuisances and 1 chicken nuisance.

There were 204 inspections of markets made, and 193 pounds of veal and 50 pounds of beef were condemned and destroyed. There were five fish markets inspected, eight slaughter houses, four rendering establishments, three milk rooms and forty-eight milk wagons. Four milk violations were found. Other inspections were made by the milk and market inspector, but only the more important are given.

Among the plumbing inspections the more important were 128 of old buildings, 108 of new buildings, 42 of drains, 22 of sewer connections, 31 of tile drains, 31 of cesspools, 36 of wash basins, 52 of sinks, 24 of bath tubs, 24 wash trays, 11 hopper closets, 64 tank closets. There were 161 permits issued for plumbing and building purposes. Twenty-six building plans were considered, of which nine were old buildings and seventeen new buildings.

CONTAGIOUS DISEASES REPORTED

	1902	1901		1902	1901
Typhoid fever	5	9	Chickenpox	8	6
Scarlet fever	11	7	Measles	11	38
Diphtheria	8	56	Whooping-cough	0	0
Consumption	4	1			

Of the five cases of typhoid fever reported, four were among firemen, working for the New York Central and Hudson River railroad, Mohawk division, between Albany and Syracuse, so that only one case of typhoid fever is known to have been contracted within the city limits.

Of the eleven cases of scarlet fever reported, six were in one institution, making six separate centers of infection in the city of Albany.

Of the eight cases of diphtheria reported, there was one death; antitoxine was used in this case, but the patient died at the end of six weeks of diphtheritic paralysis.

Number of houses fumigated..29 Number of rooms fumigated..84

Number of days quarantine for diphtheria:
Longest......63 Shortest......12 Average......30½

Number of days quarantine for scarlet fever:
Longest......33 Shortest......21 Average......26

EPIDEMICS OF SMALLPOX

The Lancet, January 12. 1901.

Our sanitary laws, including the provision of a system for the notification of the chief infectious diseases and for their isolation, have the disadvantage of throwing us somewhat off our guard as to the risks we run. This is especially so in the case of smallpox, which is no sooner detected than it is isolated severely, and all persons exposed to the infection are isolated, too, and revaccinated into the bargain. But in spite of all such laws we are reminded that smallpox is still smallpox, and that it will sooner or later assert itself in the absence of efficient vaccination and revaccination on an epidemic scale. Our Paris correspondent told us in *The Lancet* of November 24th of a recrudescence of smallpox in that city, where in ordinary times, owing to the vaccination laws being obligatory, there are very few cases. In 1899 there were only four deaths. In 1900 came the Exhibition and an influx of foreigners. From January 1st to the end of May there were fifteen deaths, from June 1st to November 11th there were one hundred deaths, and our correspondent reported in *The Lancet* of December 22d that seventeen deaths had occurred in the previous week—as high a rate as any recorded since the beginning of the epidemic, and this in spite of vigorous measures of the police for promoting free revaccination and the opening of stations at all hospitals and at most of the *mairies,* which were thronged all day long. Again, the *Medical Record* of New York of December 8th states that a nest of smallpox patients had been discovered by the Board of Health in West Sixty-ninth street. Between thirty and forty patients were found and removed to hospitals. Our contemporary adds what, of course, we expect to read, that the result of the discovery and its publication in the papers has been a vaccination boom of no mean proportions. The publication of such facts may serve to restore the reason of some people and their power to form a fair estimate of the situation of this country with its ever-accumulating millions of unvaccinated people and its constant contact with New York and Paris. No system of sanitary police yet discovered can be relied on to protect unvaccinated persons or persons who have not undergone proper revaccination. Cases of smallpox occur unexpectedly. The sufferers move about in a state of undefined and perhaps unsuspected malaise for days, infecting others as they go along, till, as in New York, a nest of cases has accumulated. We should be failing in our duty if we did not give editorial prominence to such risks. But in the present mood of English intelligence on the subject we do not expect that anything short of an epidemic will drive people to the vaccinator. Then they will run with undignified haste when it may be too late. In the meantime all fair and sensible people will see that the epidemics we refer to, and all epidemics of smallpox, are only controlled by revaccination efficiently performed.

Berlin Board of Health Regulations for Vaccination

Medical Record, *March* 22, 1902.

1. Vaccination in infancy, renewed at the end of childhood, renders an individual practically as safe from death from smallpox as if that disease had been survived in childhood, and almost as safe from attack.

2. The duration of the immunity conferred by vaccination is variable. In many individuals vaccination in infancy and revaccination in childhood is sufficient for life protection. In a limited number immunity is lost in five or six years. It is never possible to know with certainty to which class an individual belongs. In the face of an epidemic, therefore, vaccination of all who have not been vaccinated within five or six years is giving what the lawyers call the benefit of a reasonable doubt. Every one who has been vaccinated in infancy and childhood should be vaccinated not less than once in adult life.

3. The immunity conferred by vaccination is in direct proportion to the thoroughness with which it is performed, and this is shown with considerable accuracy by the character and number of the resulting scars.

4. Vaccination in infancy alone is not sufficient wholly to prevent smallpox among the adult population.

5. Optional vaccination has not proved sufficient to protect the community from smallpox. Compulsory vaccination is a measure warranted by more than a century of experience.

6. The mild compulsion enforced in this country by requiring vaccination, or evidence of its recent performance, upon admission to the public schools, should have the hearty support of parents and physicians alike.

DIPHTHERIA ANTITOXIN

The New York State Department of Health has issued the following announcement relating to the distribution of diphtheria antitoxin:

The State Department of Health now furnishes diphtheria antitoxin, prepared and tested in its antitoxin laboratory, under the following regulations:

It is to be supplied for the treatment or immunization of any of the following persons:

Inmates of State institutions.

Inmates of other charitable institutions located in New York State.

Persons residing in this State unable to purchase the remedy.

Antitoxin prepared and distributed by this department is not to be sold under any circumstances, and a violation of the above prescribed rules will subject the violator to the penalty provided by section 397 of the Penal Code, which is as follows:

"A person who wilfully violates any provision of the health laws, the punishment for violating which is not otherwise prescribed by those laws, or by this code; and a person who wilfully violates or refuses or omits to comply with any lawful order or regulation, * * * made or established by any public officer under authority of the health laws, is punishable by imprisonment not exceeding one year, or a fine not exceeding two thousand dollars, or by both."

Physicians obtaining antitoxin for use as above noted, must agree to report the results from its use on the proper blank.

Those entitled to receive the remedy under the above schedule should apply as follows:

State institutions, to the State Department of Health, Albany.

All others to the health officer of the city, town or village where they are located or reside.

The serum is to be distributed in two vials containing 1,500 and 2,500 units of antitoxin in volumes of about five and ten cubic centimeters respectively.

The actual volume of serum in the vials may be reduced from time to time, without any decrease in the number of units of antitoxin.

The vials will always be labeled in such a manner as to clearly show the number of antitoxic units contained in the full volume of serum present.

Dosage for Treatment. The dose recommended varies with the severity of the case, and especially with the day of the disease on which the antitoxin is first administered. The earlier the remedy is used, the more favorable are the results obtained.

In mild cases where the serum is administered within twenty-four hours of the onset of the disease, the initial dose should be not less than 1,500 units, and should be repeated every eight hours until most marked and decided improvement results.

In severe cases where the serum is administered within thirty-six hours of the onset of the disease, 2,500 or 3,000 units should be the dose employed, and repeated in the same manner.

In the very severe cases, especially in croup, and when the treatment is not begun until after thirty-six hours of the onset of the disease, the dose should be from 3,000 to 5,000 units. In these cases, as in the others, the injections should be repeated every eight hours, until there is not the slightest doubt of a complete convalescence.

Dose for Immunization. Three to five hundred units of antitoxin should be injected into any child or adult who has been exposed to diphtheria. Such individual will then be protected from the disease with almost absolute certainty for a period of from three to four weeks.

Mode of Administration. The serum should be administered by hypodermic injections made deeply into a portion of the anterior surface of the body where there is ample subcutaneous cellular tissue.

The skin over the selected region should be thoroughly cleaned with soap and water, and then washed with alcohol or some disinfecting solution. The syringe should be large enough to contain the dose to be given (except where excessively large doses are used), and should be thoroughly sterilized. Boiling for a few minutes is the best method.

Cases in which diphtheria is suspected, as in croup, antitoxin should be administered at once and a culture taken from the affected region for bacteriological diagnosis.

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held April 9, 1902, in Alumni Hall. The meeting was called to order at 8:45 P. M., the President, Dr. William H. Murray in the chair. The following members were present: Drs. Blumer, Classen, Jenkins, O'Leary, Lomax, MacFarlane, Mosher, Murray, Shaw, Sheldon, Traver, Trego, A. Vander Veer, E. A. Vander Veer, Ward and Wiltse, and several guests.

1. *Reading of the minutes of last meeting.* The minutes as printed in the ALBANY MEDICAL ANNALS were adopted.

2. *Minutes of special meetings.* There were none.

3. *Applications for membership.* The names of Drs. H. W. CARY, ARTHUR T. LAIRD and JAMES F. ROONEY were presented and referred to the censors by the President.

4. *Reports and resolutions.* Dr. WARD read a letter he had received from the secretary of the Albany Chamber of Commerce asking for medical endorsement of certain facts about the healthfulness of Albany. The speaker then referred to the excellent work now being done by the Cham-

ber of Commerce and thought it should receive the support of the medical profession. The suggested wording for a poster was: "Healthy location, pure water and good drainage make Albany one of the healthiest cities in the country." Dr. Ward thought these facts should receive the endorsement of the Society and moved that the Chamber of Commerce be authorized by the Medical Society of the County of Albany, through its President, Dr. William H. Murray, to issue a poster relating to the healthfulness of Albany.

This motion was seconded by Dr. **Albert Vander Veer** and carried unanimously.

Dr. **James F. Rooney** read a paper on "A Case of Angioneurotic Œdema."

At the close of Dr. Rooney's paper the President opened the meeting for discussion.

Dr. **Ward** said he had little to add to Dr. Rooney's paper. He had a case in a neurotic woman forty-seven years old. She had no hysterical symptoms but had always had a nervous temperament. A peculiar feature was that she was subject to attacks of herpes in various parts of the body either before or after the attack of angioneurotic œdema. She never had a herpes zoster but it appeared on the thighs, lips, etc. There were four attacks in three years.

Dr. A. H. **Traver** then read a paper on "Traumatic Appendicitis."

The **President** opened the meeting for discussion.

Dr. **Albert Vander Veer** said he fully agreed with the conclusions reached by Dr. Traver. In a certain number of cases trauma without doubt is a factor in causing appendicitis. He related a case of a boy who had received an injury of the abdomen which was followed in a few days by a well marked attack of appendicitis. Dr. Traver's case was unusal in that the appendicitis appeared so late, but the history and train of symptoms left no doubt as to the diagnosis.

Dr. **Blumer** asked if any evidence of fecal concretions was found in the appendix. Many cases of traumatic appendicitis had been reported where such were present. Dr. **Traver** replied that the appendix had not been opened, but he had satisfied himself that none were present.

Dr. **Lomax** spoke of a case of traumatic appendicitis he had seen several years ago. The patient received a fall and was struck over the right anterior superior spine of the ilium. A few days later she had a well marked attack of appendicitis. The family refused to allow an operation at first, but two weeks later Dr. Macdonald operated. He had great difficulty in finding the appendix, which, when found, contained a cherry pit. The appendix had sloughed off and the abdomen contained a quantity of pus. The patient died two days after the operation.

Dr. **Harris Moak** read a paper on "Occurrence of Carcinoma and Tuberculosis in the Same Organ or Tissue."

The **President** opened the meeting for discussion.

Dr. **Jenkins** expressed himself as greatly interested both in the paper and in the subject. He had done much work along this line. Eight or ten years ago he had examined a tumor removed from the breast which was supposed to be a carcinoma. When sections were made he found to his surprise that the growth was tubercular. There was a great proliferation of cells, due, undoubtedly, to the action of the tubercle bacilli.

He had thought it possible for these cells to be carried through the lymph or blood to other portions of the body and there set up a new growth, which might be taken for cancer.

Dr. Albert Vander Veer thought Dr. Moak's paper was of great value and interest. He remembered two cases of carcinoma where there was tuberculosis of the lungs. These cases were interresting on account of their value. He spoke of one case in which Dr. Elting had performed the autopsy. The patient was eighty-eight years of age when he died. When twenty-one years of age he had pulmonary tuberculosis and made a good recovery. Dr. Vander Veer first saw him when he was fifty-five years old and at that time the evidences of the old tuberculosis could easily be recognized. At the autopsy there was a carcinoma involving the appendix and evidences of an old peritonitis with adhesions. There was also a well marked mitral regurgitation.

Dr. Rooney said he had seen one of the cases reported by Dr. Moak and besides a marked pallor and greed for potatoes, very few symptoms were presented. There was nothing to point to any involvement of the lungs. The condition found at the autopsy was not recognized during life.

Dr. Emerick had made repeated examinations of the same patient. This man had entered St. Peter's Hospital, but was soon discharged, because no evidence of disease could be discovered. He was considered a malingerer. At the Albany Hospital he stated he had been injured. He was very cheerful, but refused to exercise and always wanted to remain in bed. The most striking symptoms were a marked dryness of the skin, emaciation and anæmia, but nothing to indicate the extensive disease found after death.

Dr. Moak said that Dr. Jenkins had advanced what was Ribbert's pet theory, that of loss of cell restraint. Ribbert claims that when cancer is not due to the tubercle bacillus it was due to other organisms.

Dr. Vander Veer read a paper entitled "Malignant Disease of the Cæcum. Report of Four Cases with Operations."

The President then opened the meeting for discussion.

Dr. Blumer said the first case described by Dr. Vander Veer was of great interest. It belongs to a group of cases of the so-called hypertrophic tuberculosis of the cæcum which were first described by the French school. The literature was reviewed last year by Crowder in the *American Journal of Medical Sciences,* and more recently Lartigau has published an exhaustive study of the subject in the *Journal of Experimental Medicine.* This hypertrophic form of tuberculosis, which closely resembles new growth, is also found in the lymph glands and in the larynx. Certain cases which have been described as Hodgkin's disease belong to this type, and also certain forms of laryngeal tumors. In Dr. Vander Veer's case the growth at the head of the cæcum looked to the naked eye like a sarcoma. This was further suggested by what appeared to be a metastasis on the appendix. One point which might have led us to suspect tuberculosis, if we had been acquainted with this form of the disease at that time, was the presence of an ulcer perforating into the growth from the intestine. Microscopical examination in this case showed typical tuberculosis in places. In some of the reported cases the lesions were not typically tuberculosis, though large numbers of tubercle bacilli were present. In Lartigau's case two or three feet of the intestines were involved, being thickened and tube-like.

In Dr. Vander Veer's other case of adeno-carcinoma, where the patient lived a year after the operation, an interesting point was the implantation carcinoma which had occurred along the line of anastomosis. The growth was perfectly circular, and projected into the lumen of the intestine. The intestinal tumors of this class are especially hopeful for operation, as metastases usually take place at a late date. These growths often originate as adenomata, and later on undergo malignant degeneration. In many cases death results before metastases occur, from mechanical obstruction of the bowels.

The case of sarcoma of the cæcum is also interesting. This class of cases is beginning to be recognized as a definite form of new growth, especially in the region of the valve.

Dr. MACFARLANE said he remembered very well one of the cases cited by Dr. Vander Veer. He had examined the stomach contents and found no vidence of malignant disease; on palpating the abdomen he felt a mass in the right hypochondriac region which he felt sure was a movable kidney. He was positive he felt the hilus of the kidney. The mass moved with respiration. This case was a lesson to him and showed how easy it was to become obstinate in one's opinion.

However sure we are of a diagnosis no step should be neglected in the examination. If the bowel had been washed out and the colon dilated the obstruction might have been detected.

The conclusion from these cases is that an exploratory incision is indicated in all doubtful abdominal conditions.

Dr. BLUMER thought that possibly the use of large doses of bismuth would aid in diagnosis. Bismuth gives a shadow when exposed to the X-rays, so that by its use the movements of the stomach and intestines might be observed. He did not know if this had ever been tried.

Dr. VANDER VEER said that possibly Dr. Blumer's suggestion may be of great value and it certainly should be tried. He thoroughly agreed with Drs. Blumer and MacFarlane in regard to an early exploration. Even in desperate cases an operation is justified if only an anastomosis is done. By this means the malignant growth is given a complete rest and the patient's life is lengthened.

On motion the Society adjourned.

HENRY L. K. SHAW, *Secretary.*

WILLIAM H. MURRAY, *President.*

MEMORIAL MEETING—THEODORE W. NELLIS, M. D.

A special meeting of the Society was held in Alumni Hall on Tuesday afternoon, April fifteenth. The President, Dr. William H. Murray, called the meeting to order at five minutes after one. The following members were present: Drs. Bartlett, Blumer, Classen, Cook, Goewey, L. Hale, MacFarlane, Mereness, Murray, O'Leary, Perry, Root, Shaw, Tucker and Wiltse.

The PRESIDENT announced that the meeting was called in order to take action on the death of one of its members, Dr. THEODORE W. NELLIS.

Dr. ROOT moved that the President appoint a committee on resolutions. Carried.

The President named the following committee: Drs. PERRY, CLASSEN, COOK, ELTING and ROOT.

Dr. O'LEARY moved that a recess of five minutes be taken while the committee conferred. Carried.

When the meeting was again called to order Dr. PERRY made the following remarks:

Mr. President and Gentlemen: As far back as 1879 the college faculty deemed it expedient to inaugurate a series of lectures and recitations for the spring months, in order that those students who lived in this city and nearby places, and others who might wish to avail themselves of the opportunity could thus rehearse much that they had gone over and still further prepare themselves for the term which was to follow. The course was conducted entirely by the younger members of the profession who were in active practice in the city and I was one of the number. Among the first to enroll his name as member of the class was T. W. Nellis, and it was then our acquaintance began.

The pleasant friendship which followed has continued unceasing, having terminated only with his death. In his early professional career, when he gave much time to his practice, we met often, and later when commercial interests called us together, such meetings were always of the pleasantest. We joined hands some years ago in a delightful trip among the British Isles and on the continent, finally bidding each other good bye and "bon voyage" one beautiful August morning in the city of Paris, he going north to Belgium, while I continued south to Italy. As the months rolled by and we again met in our native city, we rehearsed many times over our pleasures and experiences. I shall miss the doctor very much and my memory of him will always be that of a good physician, a loyal friend and genial companion, and now, Mr. President, having been selected as one of your committee on resolutions, I would respectfully submit the following:

WHEREAS, This Society has heard with deep regret and profound sorrow of the death of Dr. T. W. Nellis, which occurred at his late residence, 210 State street, on the morning of April 14, 1902, and while this sad event was not wholly unexpected, the shock was none the less severe. We are again forcibly reminded that we stand within the shadow of death and are about to strike forever from the roll of active membership in this Society the name of an old and honored associate, therefore be it

Resolved, That in the death of Dr. Nellis we recognize the wisdom of a higher power, and bow in humble submission to the will of Almighty God who doeth all things well.

Resolved, That this Society is deeply sensible of the loss it has sustained in his death, and that his memory will be perpetuated by reason of his many kindly qualities, his unostentatious charities, his loyalty to his friends, and his love for the profession he had chosen.

Resolved, That this Society extend to his bereaved wife and immediate family its sincerest sympathy in this, their hour of affliction, assuring them again of its appreciation of the deep sense of loss sustained by his death.

Resolved, That a copy of these resolutions be transmitted to the family of deceased and that the same be spread on the minutes of this society.

Dr. **Macfarlane** moved that the resolutions be adopted. Carried.

On motion of Dr. **Root** the meeting adjourned.

Henry L. K. Shaw, *Secretary.*

William H. Murray, *President.*

Medical Association of Troy and Vicinity

A regular meeting of the Medical Association of Troy and Vicinity was held Tuesday, April 1, 1902, at the office of Dr. E. D. Ferguson. The meeting was called to order at 8:45 P. M. by the President, Dr. J. W. Morris. Sixty members were present.

The minutes of the last meeting were read and adopted.

Dr. W. H. **Sweet** read the history of a typical case of Addison's disease extending over a period of eleven years.

Dr. E. D. **Ferguson** presented a case of Addison's disease which he is treating with supra-renal extract.

The paper and case were discussed by Dr. H. C. **Gordinier**, who cited a case now at the Samaritan Hospital, where the blood examination showed a marked increase in the erythrocytes. There was also a very peculiar odor about the patient.

Dr. **James C. Hutchinson** then reported three very interesting cases of skin disease. The first was one of severe eczema extending all over the body. The remedy that seemed to do the most good was drachm doses of tincture of chloride of iron, given every three to four hours. The second case was one of probable acute tuberculosis of the skin following measles. The third case was one of pemphigus vulgaris. The paper was discussed by Drs. **Meredith** and **Allen**.

Dr. **James P. Marsh** then reported three cases: (1) Intestinal anastomosis for gangrene. The Murphy button was used and the patient made a rapid recovery. (2) A case of cholecystostomy for a large stone. Recovery. (3) Case of foreign bodies in the hand. A very clear radiograph showed the condition.

Dr. H. C. **Gordinier** then reported a case of abscess of the brain with Jacksonian attacks, beginning with movements of the head and extending to the arm and face. The diagnosis had been that of tumor, but at operation no surface lesion was found. It was decided that the lesion was subcortical and inoperable. Section showed, however, the lesion to be an encapsulated abscess in the centrum ovale of the frontal lobe, involving the bases of the first and second frontal and the middle of the anterior central convolutions. Dr. Gordinier emphasized the importance of exploratory incision or puncture in cases of inoperable subcortical lesions.

The case was discussed by Dr. E. D. Ferguson.

As there was no further business, a motion to adjourn was seconded and carried.

Edward W. Becker, *Secretary.*

J. W. Morris, *President.*

Saratoga Springs Medical Society

A regular meeting of the Saratoga Springs Medical Society was held March 21, 1902, in the Business Men's Association Rooms. The meeting was called to order at 9:15 p. m., by President Comstock.

The minutes of the last meeting were read and approved.

The first paper of the Symposium on "Acute Gastritis" treated of the "Etiology and Pathology," and was presented by Dr. Ledlie; the "Symptoms and Diagnosis" by Dr. Sweetman, of Ballston, and the "Prognosis and Treatment" by Dr. Resseguie.

The President declared the papers open for discussion.

Dr. Humphrey thought the alcoholic cases were as difficult to treat as any of the forms of acute gastritis, and were frequently met with. The absolute withdrawal of the alcohol was necessary for successful treatment, but was often difficult of accomplishment.

Dr. Swan spoke of the use of cocaine combined with large doses of bismuth, which he had found efficacious in some of his cases of toxic gastritis. Rectal enemas should as a rule be pre-digested, as these were easier of assimilation. He had had no experience with the suppurative form of gastritis. He had found it was often hard to get sufficient rest for the stomach, as the laity have a fallacy that the patient would not recover properly without food, even for a few days.

Dr. Moriarta spoke of the use of alcohol in carbolic acid poisoning, and thought the members' attention could not be called to this valuable remedy too often. In the cases of gastritis accompanied with tenderness over the epigastrium, he had observed beneficial results from nitrate of silver combined with extract of gentian in pill form. In the alcohol cases, he believed nothing was better than drop doses of capsicum diluted, with rest to the stomach, of course. He began the use of hot milk, or animal broths, in small doses every half hour, regardless of vomiting, although he had found the vomiting ceased after two or three doses. He believed in using large doses of bismuth as had been stated, but we should see to it that we had a reliable preparation or we might get arsenical poisoning.

Dr. Ledlie asked Dr. Resseguie if he had used alcohol in any of his cases of carbolic acid poisoning.

Dr. Resseguie replied that he had not, but was sure he would in his next case. He was surprised in looking over the text-books and literature on the treatment of carbolic acid poisoning, to find how little was written regarding the use of this remedy, which is so valuable, for we know that it stops almost instantly the action of carbolic on all tissues. Recently he had seen three severe cases of poisoning from large doses of carbolic acid taken with suicidal intent, and two of these had recovered, although unconscious for three and six hours respectively, as he had been able to get to the cases within a few minutes and use the stomach tube promptly.

As there was no further discussion, a motion to adjourn was declared in order, and the President announced a Symposium on Chronic Gastritis for the next meeting.

The meeting adjourned in due form.

The following named members were present: Drs. G. F. Comstock, J. H. Humphrey, J. T. Sweetman, Jr., W. E. Swan, D. C. Moriarta, G. H. Fish, A. E. Palmer, J. B. Ledlie, A. Hewitt, M. E. Van Aernum, R. Castree, A. S. Downs, F. J. Resseguie.

FREDERICK J. RESSEGUIE, *Secretary.*

GEORGE F. COMSTOCK, *President.*

Medical News

Edited by H. Judson Lipes, M. D.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY; ANNUAL MEETING.—The annual meeting of the Medical Society of the County of Albany will be held at Alumni Hall, on Tuesday evening, May 13, 1902, at 8:45 o'clock.

THE TWENTY-NINTH MEETING OF THE ASSOCIATION OF THE ALUMNI OF ALBANY MEDICAL COLLEGE.—The Alumni Association of the Albany Medical College will hold its twenty-ninth annual meeting May 6, 1902. The decennial classes, '52, '62, '72, '82, '92 and '77 will hold reunions and receive the reports of their class historians. The class meetings will be held as follows: the classes of '52 and '62 will meet in the Chemical Laboratory, '72 in the Chemical Lecture Room, '77 in the Amphitheatre, '82 in Recitation Room A, and '92 in Recitation Room B.

At 10:30 A. M. there will be a general Alumni meeting. The Faculty Address of Welcome will be delivered by Prof. Frederic C. Curtis, M. D. This will be followed by the reports of the several class historians, and after transacting the usual miscellaneous business the president, Dr. Clarkson C. Schuyler, will deliver his address. Election of officers for the coming year will then occur.

In the afternoon at 3 o'clock the commencement exercises of the class of 1902 will be held at Odd Fellows' Hall. The address of the day will be delivered by the Hon. Nathan L. Miller, Comptroller of the State of New York.

The Alumni dinner will be held at Albany's new hotel, the Ten Eyck. No effort will be spared to make this dinner the most enjoyable in years.

ALBANY COLLEGE OF PHARMACY; COMMENCEMENT, 1902.—The twenty-first annual commencement exercises of the Albany College of Pharmacy were held in the afternoon at Odd Fellows' Hall, April 1, 1902. President Willis G. Tucker gave the address of welcome. Dr. Raymond awarded diplomas to Samuel Armstrong, Pine Bush; Frank Clayton Barrows, Albany; Lawrence Henry Burke, Oneonta; William John Friday, Schenectady; Edward Augustin Gillans, Amsterdam; Fred Harmon, Adams, Mass; Walter William Janser, Albany; George Gorman Lenney, Potsdam; John Alexander Livingston, Hoosick Falls; John Edward McNany, Port Henry; Winifred May Miller, Boonville; John Kidder Oakes, Cherry Valley; George Avery Partridge, Troy; Elmer William Pepper, Schenectady; John David Sauter, Schenectady; Arthur Brown Young, Johnstown.

After the valedictory address was delivered by Edward A. Gillans, Prof. Alfred B. Huested presented the prizes as follows: To Edward A. Gillans, a prize of $25 for the best general examination. This prize was given by Louis Sautter, Ph. D. A prize of $20 was awarded to Frank C. Barrows for having passed the best examination in pharmaceutical laboratory work, and submitting the best set of preparations made there. The Alumni Association offered this prize. The prize of $10, offered by Dr. John M. Bigelow for the student passing the best examination in microscopy and submitting the best set of mounts made during the course, went to Miss Winifred M. Miller. For the best examination in all branches, a prize of $15 was awarded to Elias W. Rich. For the best work and passing the best examination in chemistry, Neil W. Avery received a prize of $15, donated by Dr. Tucker, and another of $10 for the best examination in pharmaceutical laboratory work.

THE ALBANY COLLEGE OF PHARMACY ALUMNI ASSOCIATION.—The twentieth annual meeting of the Alumni Association was held in Alumni Hall Tuesday morning, April 1, 1902. H. S. Davenport, the class historian, read a report of the occurrences of the year. T. J. Bradley, secretary of the Association, read the necrology for the year. Officers were then unanimously elected as follows: President, Warren L. Bradt, Albany; first vice-president, John Lyons, Yonkers; second vice-president, Elmer W. Pepper, Schenectady; treasurer, Edwin C. Hutman, Albany; Historian, class of '83, Louis Sautter, Albany; historian, class of '93, W. C. Griswold, Nassau.

ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR MARCH, 1902.—Number of new cases reported to the Guild in March, 50. *Classification of cases:* Dispensary patients receiving home care (including 3 dental cases), 7; district cases reported by one health physician, 6; charity cases reported by other physicians, 19; total number of charity cases, 32; moderate income patients, 18. *Classification of diseases:* Medical, 25; surgical, 9; gynecological, 16; removed to hospitals, 3; died, 3.

Special Obstetrical Department: Head obstetrician in charge of cases. Number of students in attendance, 7; Guild nurses, 4; patients, 4; number of visits made by obstetrician, 11; by medical students, 25; by the Guild nurses, 38; total for this department, 74.

Visits of the Guild Nurses: Number of visits with nursing treatment, 626; for professional supervision of convalescents, 351; total number of visits in March, 977. Four nurses were on duty. Cases were reported to the Guild by the city physician, by 1 of the health physicians and by 27 other physicians. Dentists, 3.

ALBANY HOSPITAL; ANNUAL REPORT FOR THE YEAR ENDING MARCH 1, 1902.—The Governors of the Albany Hospital have issued their statement of the work for the past year and have made their annual appeal for support. This report shows that the total number of patients treated was 2,279. Of this number, 1,298 were discharged recovered; 462 were discharged improved; 206 were discharged unimproved, and 138 died. On March 1, 1902, there remained 175 patients in the Hospital. In the Out-Door department during the year there were 5,682 treatments received by patients, and there were 3,824 prescriptions made up and given away to needy patients.

During this year Pavilion F, erected and furnished by the liberality of the supervisors of the county, and intended for the care of persons suffering under mental disorders, has been satisfactorily completed. It was opened a few weeks ago, and has already shown its usefulness. Mr. John G. Myers, deceased, an esteemed governor of the Hospital, in addition to his many gifts during his lifetime, left a legacy of $5,000 to the Hospital in his will. Miss Ellen Campbell gave to the Hospital a legacy of $50,000 for the benefit of cripples, which will soon be paid. Mrs. Isabella E. Merchant gave a residuary legacy to the Hospital which, it is hoped, will amount to about $20,000. By the generous gift of Mr. and Mrs. Robert C. Pruyn, there has been built in the basement of the Nurses' Home an admirably arranged diet kitchen, with every equipment and with a well-contrived store room. They have also paid the salary of the diet mistress. Mr. and Mrs. Albert I. Marx have beautifully furnished the solarium in upper Pavilion D, in memory of their son, Jerome I. Marx, and Miss Monteath's Book Club and Mr. Herman Myers have furnished private rooms during the year. The grounds around the Hospital have been kept in order at the expense of the same liberal friend who originally caused them to be laid out. Every year they become more attractive. Of the debt incurred in building and furnishing the Hospital there remains a balance of $15,272.31. This shows a reduction during the year of $1.727.69. At the time of the appeal of last year there was also a debt of $9,183.93 incurred for repairs and maintenance. But this was not all incurred for the expense of that year, as there had been a similar debt of a somewhat less amount the year before. At the present there would be a similar debt of $11,858.80, but for a special contribution recently made by the Governors and their friends. The total expenditures in the erection of buildings is, as stated last year, $243,773.66; in furnishing, $41,673.46. To this should be added the cost of Pavilion F of over $17,000, paid by the supervisors. There has been paid for improvements of the grounds, $13,395.28. During the year there was given to the Hospital by a gentleman of another city a new and very fine "invalid carriage," or ambulance, and a team of horses. The Hospital still has the old ambulance; and there is great need of a stable on the Hospital grounds. A building on the grounds where the ambulances and the team could be kept would be very useful.

ST. PETER'S HOSPITAL; ANNUAL REPORT FOR 1901.—According to the report recently issued, there were 533 patients treated in the Hospital during the year, giving 17,350 days treatment. 4,086 treatments were recorded at dispensary; with 17,717 prescriptions.

Notwithstanding recent improvements in the Hospital, the Advisory Board feels that the time has come when this charity requires a new building. To this end, during the past year, $2,000 has been put aside, of which $1,700 was derived from the legacy of the Rev. Charles Zucker and $300 from yearly subscriptions. The generous bequest of the late John G. Myers, who always manifested a deep interest in the Hospital, will be added to the Building Fund. In addition, the Sister Superior has secured pledges of about $7,000. It is the purpose of the management of the Hospital to add to this fund all legacies and extraordinary donations hereafter received, so that when a new building is commenced it shall be with the assurance of resources sufficient to justify the undertaking. In the meantime, annual subscribers are entreated not to decrease their usual contributions towards the maintenance of the institution. Contributions may be sent to Edward J. Hussey, treasurer, at National Commercial Bank.

NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY.—The first annual meeting of the National Association for the Study of Epilepsy and the Care and treatment of Epileptics was held in Washington, D. C., on the 14th and 15th of May, 1901. The interest in the occasion was much enhanced by the aid kindly rendered by Secretary Hay and the benevolent co-operation of many of our Foreign Ambassadors and Ministers, through whom valuable papers and reports were secured. The volume containing the transactions of this important meeting is deserving the attention of all interested in that pitiable class of sufferers whose welfare the Association is endeavoring to promote. The volume contains half-tone illustrations of the Craig Colony, the Massachusetts Hospital for Epileptics, and Chalfont St. Peter, with maps of the New Jersey State Village for Epileptics and the Epileptic Colony at Abilene, Texas. The books are now ready for distribution, and may be obtained by addressing the secretary of the Association, Dr. William P. Spratling, Craig Colony, Sonyea, N. Y.

AMERICAN MEDICAL ASSOCIATION; PATHOLOGICAL EXHIBIT.—The Committee on Pathologic Exhibit for the American Medical Association is anxious to secure materials for the coming session at Saratoga, June 10th to 13th inclusive. This exhibit was accorded much praise and comment during the session at Atlantic City and St. Paul respectively, where were collected valuable exhibits from all parts of the country. The materials included not only pathologic specimens, but the allied fields, bacteriology, hæmatology, physiology and biology were well represented. It would also be desirable to secure exhibits of new apparatus, charts, etc., used by teachers of pathology and physiology in medical colleges. This exhibit has already become a permanent feature of the annual sessions of the American Medical Association and the committee is desirous of securing its list of exhibits as early as possible, and to this end asks those having desirable materials to communicate with any member of the committee. To contribute to the value of the work, it is suggested that as far as possible each contributor select materials illustrative of one classification and by such specialization enhance the usefulness of the display. Those lending their materials may feel assured that good care will be given their exhibits while in the hands of the committee, and due credit will be given in the published reports.

F. M. Jeffries, 214 E. 34th St., New York City,
W. A. Evans, 103 State St., Suite 1403, Chicago, Ill.
Roger G. Perkins, West. Res. Med. School, Cleveland, O.
Committee.

State and County Civil Service Examinations.—There will be open competitive examinations for positions in New York State and county departments and institutions, held May 10, 1902, for the following positions: Apothecary, hospitals, prisons and institutions, $40 to $60 a month and maintenance, open to men and women; assistant in photographic chemistry, Cancer Laboratory, Buffalo, $40 a month; trained nurse, State institutions, usual salary $25 a month and maintenance. Applications for these positions must be filed in the office of the commission on or before noon of May 5th.

An Opening for Internes in the State Hospitals.—Students about to graduate who are unable to secure positions in general hospitals, or young physicians whose terms are about to expire in general hopsitals and who wish to enlarge their experience, are now offered an opportunity to enter the New York State hospitals as internes or clinical assistants. These positions provide lodging and board. Appointments are made for a year. Some twenty-eight positions will be opened in the fourteen State hospitals situated in the following places in New York State: Utica, Buffalo, Gowanda (homeopathic), Binghamton, Kings Park, L. I.; Flatbush, Brooklyn; Central Islip, L. I.; Ward's Island, New York City (two hospitals); Rochester, Ogdensburg, Poughkeepsie, Willard, Middletown (hœomeopathic).

Although these are hospitals for the insane, yet they are so large that opportunities for experience in general medicine are abundant. Each hospital is well equipped with clinico-pathological laboratory and apparatus, operating rooms, trained nurses, hydrotherapeutic and electrical devices and good medical libraries. The field for study in general medicine is excellent, and surgical operations of all kinds are frequently performed, either by resident or consulting surgeons. It is thought that many students who wish hospital experience and are unable to obtain it because of the relatively few places available in general hospitals may be glad to learn that positions of this kind have been thrown open to them. It is believed that young physicians wishing hospital experience will profit by a year's residence in one of these hospitals, and such as desire to continue in special work would be eligible for appointments subsequently to salaried positions in the same service.

No examinations will be necessary, but application must be made in person, with good references, directly to the medical superintendent of any of the above named hospitals or to Dr. Frederick Peterson, president of the Commission in Lunacy, 4 West 50th street, New York City.

DR. KINYOUN, DIRECTOR OF THE MULFORD BIOLOGICAL LABORATORIES.—The biological laboratories of the H. K. Mulford Company at Glenolden, Pa., have secured the services of Joseph J. Kinyoun, M. D., Ph. D., late surgeon of the Marine Hospital Service and director of the Hygienic Laboratory of the Marine Hospital Service at Washington.

PERSONAL.—MARRIED—At St. Peter's church, Albany, N. Y., Monday afternoon, April 14, 1902, Dr. WILLIAM CHURCH GRISWOLD (A. M. C. '97), and Miss HELEN STOUT. After a few weeks' trip through the South and West Dr. Griswold will leave for the Philippines, having been appointed an assistant surgeon in the U. S. army.

—Dr. ROBERT E. DORAN (A. M. C., '93), of the Willard State Hospital, was appointed first assistant physician at the Craig Colony for Epileptics, Sonyea, N. Y., December 1, 1900, to fill the vacancy caused by the resignation of Dr. L. PIERCE CLARK.

—Dr. EDWARD L. HANES (A. M. C. '99), third assistant physician at the Craig Colony for Epileptics, Sonyea, N. Y., resigned and was transferred to the Hudson River State Hospital, October 15, 1901.

—Dr. HOWARD A. LAMOURE (A. M. C. '00), of the Rochester State Hospital, has been appointed third assistant physician at the Craig Colony.

—Dr. WILL G. MACK (A. M. C. '00), has been appointed assistant physician at Brigham Hall, Canandaigua, N. Y.

—Dr. J. M. MOSHER has removed from 202 Lark street to 170 Washington avenue, Albany, N .Y.

—Dr. ROBERT G. COOK has removed his office and residence from 45 Park avenue to 242 Alexander street, Rochester, N. Y.

—Dr. H. JUDSON LIPES has removed to 178 Washington avenue, Albany, N. Y.

—Dr. EUGENE E. HINMAN has removed to 202 Lark street, Albany, N. Y.

Book Reviews

The Mental State of Hystericals. A Study of Mental Stigmata and Mental Accidents. By PIERRE JANET, Litt. D., M. D., Professor of Philosophy at the Collège Rollin. With a Preface by Professor J. M. CHARCOT. Translated by CAROLINE ROLLIN CORSON. G. P. Putnam's Sons, New York and London, The Knickerbocker Press, 1901.

From ancient days of possession and exorcism, through the mediæval manias of the dancers and flagellants, to recent epidemics of witchcraft and the superstition and credulity of our own time the phenomena of hysteria have presented a puzzle which even the greatest skill of modern scientific medicine has barely touched. There is very little general intelligent comprehension of the subject. A practical age is required for clearing away the doubt and mystery in which phenomena of mind are enshrouded, and of the phenomena of mind those associated with hysteria have proved the most baffling. Though the general public, lay and medical, have rapidly seized upon the essential fact of the underlying element of disease in insanity, the more subtile changes in hysteria still remain the least understood of the manifestations of the human mind.

As a clear exposition of this obscure subject Janet's book takes its place at once among the rare contributions to science which may justly be considered medical classics. It is noteworthy that his exposition of hysteria is based upon purely clinical evidence: "The method of observation plays the principal part in these researches; it is the clinical method applied to diseases of the mind. Experiment confirms it in only a small number of cases, and this experiment even, is very often but a more precise and better systematized observation. We must distrust complicated experiments on the mind, which are not easy to make; they are often sufficient to upset the mental state we aim to study. * * * * * It is useless and even dangerous to take a microscope and engage in rough anatomy; we expose ourselves thus in not knowing what we look at * * * * To examine his acts and words is at yet the best means of knowing man, and we find it neither useless nor wearisome to write down the wandering speeches of a lunatic."

The book is divided into two parts upon the *permanent* and *transient* symptoms, or, *mental stigmata* and *mental accidents* of hysteria, respectively. Part I, on "Mental Stigmata," includes five chapters, entitled Anæsthesias, Amnesias, Abulias, The Motor Disturbances and Modifications of Character. "Mental Accidents" are described as Suggestion and Subconscious Acts, Fixed Ideas, Attacks, Somnambulisms and Deliriums, the work closing with a chapter on Hysteria from a Psychological Point of View.

In the interpretation of mental symptoms there is no more valuable method than that based upon the analogies presented in health. A successful comprehension can never be attained without this comparison. The author finds the basis of his argument and the theme of his book in the similarity of hysteria and absent-mindedness. "Absent-mindedness, in fact, even in the normal man, produces phenomena equivalent to those of hysterical anæsthesia. * * * * * It is because of this absent-mindedness that the wounded soldier amid the heat of battle does not feel the pain of his wound. * * * * * Anæsthesia is an extended and chronic absent-mindedness, which prevents the subjects to it from connecting certain sensations with their personality; it is the contraction of the field of consciousness." The central point or pivot of action in this field of contracted consciousness is the "fixed idea." The acts and words of the patients at the Salpêtrière are marshalled in support of this conclusion and in illustration of the text of the book, and very satisfactory the exposition appears. "Maria, whom we have observed for the last three years, has never presented hysterical symptoms in the region of the abdomen; has not even any ovary. She is nevertheless attacked by a grave metritis complicated by a slight salpingitis. Some few months ago we took this patient to M. Térillon for a gynæcologic examination. M. Térillon was kind enough not only to examine her very carefully, but also to give us a few explanations touching the symptoms we had observed. He told us about the lumps which he felt in touching her, of their slight importance, and he declared that this patient had no need of being operated upon. Some time after, Maria came to tell us that she suffered horribly in her abdomen and she wished to know whether she were with child. In fact, her abdomen was surprisingly tympanitic and showed in the lower part an area of hyperæsthesia. She could not account for the accident since she spoke of pregnancy, and yet, as soon as she was in the somnambulic state, she gave the explanation of the phenomenon: 'It is the tumor M. Térillon spoke of.' The fixed idea, completely subconscious, absolutely unknown to the patient when awake, was thus one of the most easy to establish and modify." The character of the hysterical is thus formed upon "feebleness of attention or rather a state of perpetual absent-mindedness. * * * * The hysterical woman cannot experience several sensations at the same time. * * * While she thinks of one idea she foregts all the contrary notions which she knew quite well a moment before." Conscious and subconscious personality are arrayed in antagonism to each other, and the irruption of the subconscious state, in the general enfeeblement, destroys volition, and the patient is the victim of the underlying fixed idea. The author summarizes this argument as follows: "Hysteria is a mental disease belonging to the large group of the diseases due to weakness, to cerebral exhaustion; it has only rather vague physical symptoms, consisting especially in a general dimunition of nutrition; it is above all characterized by moral symptoms, the principal one being a weakening of the faculty of psychological synthesis, an abulia, a contraction of the field of consciousness manifesting itself in a peculiar way; a certain number of elementary phenomena, sensations and images, cease to be perceived and appear to be suppressed by the personal perception; the result is a tendency to a complete and permanent division of the personality, to the formation of several groups independent of each other; these systems of psychological factors alternate some in the wake of the others or coexist; in fine, this lack of synthesis favors the formation of certain parasitic ideas which develop completely and in isolation under the shelter of the control of the personal consciousness and which manifest themselves by the most varied disturbances, apparently only physical."

The book is written in the most transparent language, and the translation has apparently been effected in the full spirit of the original. A melancholy interest attaches to this edition in that the translator died upon the completion of her task and before experiencing the satisfaction to be derived from the appearance of the finished book in the attractive form in which it has been published. As a clear exposition of hysteria, it should be read wherever there is a practitioner of medicine who has not yet been divested of the belief that hysteria is merely a vicious manifestation of malice, deceit, malingering and fraud on the part of its victims.

A Text Book of Surgery. By Dr. HERMANN TILLMANNS, Professor in the University of Leipsic. Translated from the Seventh German Edition by BENJAMIN T. TILTON, M. D., and JOHN ROGERS, M. D. Edited by LEWIS A. STIMSON, M. D. Volume I. New York: D. Appleton & Company, 1901.

The cordial reception accorded the translation of an earlier edition of this work has led the translators to present a much later edition which brings the subject matter with which it deals quite up to date.

Volume one treats of the subject of general surgery and pathology and is divided into three main sections. Section one deals with the general principles governing surgical operations and is subdivided into ten chapters. In chapters one, two and three the preparation for an operation and the alleviation of pain and prevention of loss of blood during an operation are briefly considered. The discussion of the question of anæsthesia, though brief, is very satisfactory, and, as in most foreign works on the subject of surgery, chloroform narcosis receives the most attention. Other chapters of this section deal with the general rules governing the performance of an aseptic operation, the after-treatment of the patient, the methods of division of tissues, the methods of arresting hemorrhage and the drainage of wounds. Methods of suture, as well as the general considerations of amputation, resection and disarticulation and of plastic operations are discussed in more or less detail. In section two considerable attention is devoted to the methods of applying surgical dressings. The different materials used in making dressings as well as the antiseptics applied to wounds are briefly discussed. In this connection most attention is devoted to iodoform and its uses and abuses are pointed out as are the main features of iodoform poisoning and the methods of combatting it. The application of all kinds of bandages, splints and extension is tersely described and abundantly illustrated. Section three, which comprises about two-thirds of the volume, is devoted to surgical pathology and therapy. This section is subdivided into five chapters, the first of which considers in some detail the general subject of inflammation and injuries and contains a brief treatise on the relation of bacteria to these processes. The healing of wounds as well as the complications of this process are presented in some detail. In an appendix to this chapter there are excellent articles on the surgical aspects of tuberculosis, syphilis, leprosy and actimomycosis. Chapters two, three and four treat of injuries and surgical diseases of the soft parts, of the bones and of the joints and present practically all the important facts concerning this group of disorders. Chapter five is devoted to a general discussion of tumors, their etiology, varieties, diagnosis and treatment. The volume contains 825 pages of subject matter and 516 illustrations, which are for the most part well executed and very satisfactory. The arrangement of the work is also very satisfactory and the typography excellent, reflecting much credit upon the publishers, and, coupled with the general excellence of the subject matter, recommending the volumes to all those interested in the science and art of surgery.

A. W. E.

Current Medical Literature

SURGERY

Edited by A. Vander Veer, M. D.

The Methods of Anæsthesia and Their Limitations. (*Die Methoden der Schmerzbetaubung und ihre gegenseitige Abgrenzung.*)
J. V. Mikulicz. *Archiv für klinische Chirurgie, Bd. LXIV, Hft. IV, 1901.*

In this article the writer presents a general resumé of the subject of anæsthesia, both local and general, as practiced in his clinic during the past five years. For purposes of comparative study, he also presents the statistics of 783 physicians and dentists of Silesia who have had more or less occasion to employ anæsthetics and who report 98,539 anæsthesias.

He refers to the statistics of Gurlt of 330,429 anæsthesias with a mortality of 1 to 2,429. In the great majority of cases chloroform was employed with a mortality of 1 to 2,075, while in the cases in which ether was employed the mortality was 1 to 5,112.

Considerable attention is devoted to the subject of local anæsthesia and the dangers associated with it. In over 100,000 cases there were only three deaths attributable to the local anæsthetic, which in each instance was cocaine. A strong point in favor of local anæsthesia is the absence of severe after-results, although the occurrence of pneumonia after Schleich's local anæsthesia is a well-recognized complication. Furthermore, the artificial œdema of the tissues produced by the use of Schleich's solution is in some instances a distinct disadvantage, especially when careful dissection must be done. The relative proportion of local anæsthesia with Schleich's solution to general anæsthesia as used in the general operating room of von Mikulicz's clinic during the past five years is 1 to 8.6.

Bier's cocainization of the spinal cord has also been practiced in a number of cases with valuable results. In some instances the anæsthesia was satisfactory, while in others it was not.

In choosing the form of anæsthesia to be employed as well as the character of the anæsthetic one must bear in mind three factors: first, the immediate danger of the anæsthesia; second, the untoward after-effects, and third, the ability of the patient to endure pain.

Before the introduction of Schleich's anæsthesia it was the opinion that a great majority of the post-operative pneumonias were due to the general anæsthesia, but careful statistics seem to indicate the post-operative pneumonia occurs about as frequently after local as it does after general anæsthesia. Von Mikulicz advises strongly against the use of local anæsthesia for extensive operations upon individuals very sensitive to pain or nervous. In regard to the question as to which is the safer anæsthetic, chloroform or ether, he does not feel that the matter is as yet definitely settled. In his statistics there was one death in 1,699 cases of chloroform anæsthesia.

The writer carefully analyses the fifty-five cases of death ascribed to chloroform in the statistics collected by himself and in only four of these cases does death appear to have been directly and solely due to chloroform. He urges the very great need of a careful examination of every patient to be anæsthetized and the careful consideration of all contraindications, and believes that if sufficient attention is paid to those contraindications deaths from anæsthesia will be far less frequent. He also urges the necessity for the exercise of great care and skill in the administration of an anæsthetic and deplores the fact that it is usually administered by the least experienced assistant, while, as a matter of fact, it should be administered by the most skilled. He also gives the rules governing the administration of anæsthetics in his clinic.

In conclusion, the writer indicates certain general rules for the safe conduct of anæsthesia:

(1) The most important factor in the limitation of the danger of anæsthesia is the restriction of its administration.

(2) In every case contraindications to anæsthesia should be carefully sought after and if found the anæsthesia should be omitted or given with the greatest care.

(3) The technique of the administration of an anæsthetic is of the greatest importance.

(4) The proper choice as to the anæsthetic to be used in each individual case is of the greatest importance in restricting the danger.

(5) It is advisable in certain cases to combine local with general anæsthetics in order that the quantity of the latter administered may be limited.

(6) It is unnecessary and a bad practice to push the anæsthesia in every case to the point where not only consciousness but also the reflexes are lost.

(7) There should be exercise of great care in the selection of the anæsthetist.

The Origin of Tumors, Tuberculosis and Other Diseases Following the Action of Blunt Force, Fractures, Luxations, Herniæ and Traumatic Neuroses Excluded. (Ueber die Entstehung von Tumoren, Tuberculose und anderen Organerkrankungen nach Einwirkung stumpfer Gewalt, unter Ausschluss von Frakturen, Luxationen, Hernien und traumatischen Neurosen).

JORDAN. *Muenchener medicinische Wochenschrift, No. 44, 1901.*

The writer undertakes to discuss the influence of the action of blunt force such as contusions following a fall, blow, etc., upon the origin of tumors, surgical tuberculosis, osteomyelitis and appendicitis. He briefly reviews the theories of Virchow, Cohnheim and Ribbert relating to the origin of tumors and states that each of these investigators believes trauma to be an etiological factor in the development of tumors. While recognizing in a general way the influence of blunt force on the development of tumors, there is no absolutely definite knowledge as to just what role trauma plays in such cases. The writer carefully reviews the statistics from several of the large continental clinics and comes to the conclusion that the action of blunt force is responsible for the development of but a very small percentage of tumors.

The relationship of trauma to each of the main groups of tumors is considered and the writer finds that in carcinoma trauma is of very little etiological importance, the percentage varying with the different observers, but in general being between one to five per cent.

In regard to sarcoma trauma is of but little etiological importance, although somewhat more so than in carcinoma. Careful study of statistics seems to show that the traumatic etiology is most important in sarcomata of the extremities. Among benign tumors those of bone seem to be most influenced by trauma.

The writer proposes certain points which must be established in order to assume an etiological relationship between trauma and a tumor in question: (1) the contusion should have been observed and accurately located by a physician; (2) the tumor must correspond in its location to the point injured; (3) the lapse of time between the trauma and the appearance of the tumor must correspond with the probable period of development of the tumor; (4) it must be demonstrated that a tumor did not already exist at the site of the contusion.

The relationship of trauma to tuberculosis is discussed in considerable detail, and although clinical evidence as well as the experiments of Schuller and Krause seem to prove that such a relationship exists, nevertheless more recent experiments by Lannelongue, Achard, Friedreich and Honsell seem to demonstrate that no close relationship between trauma and the development of tuberculosis exists. Honsell believes that the apparent clinical relationship between trauma and tuberculosis results from the development of so-called latent foci of tuberculosis. Trauma appears to bear an important etiological relationship to many cases of osteomyelitis, a fact demonstrated by both clinical and experimental evidence.

The relationship of trauma to appendicitis also seems to be established in a very small percentage of cases. Cases especially susceptible to such action are those in which enteroliths exist in the appendix.

OBSTETRICS AND GYNÆCOLOGY

Edited by James P. Boyd, M. D.

The Blood Pressure and Circulation in the Placenta, with Special Reference to the Ætiology and Clinical Importance of Umbilical Souffle. (Ueber Blutdruck und Circulation in der Placenta, über Nabelschnurgeräusch, insbesondere dessen Ætiologie und klinische Bedeutung.)

SIETZ. *Sammlung klinische Vorträge, No. 320, November, 1901.*

This brochure contains a careful analysis of the literature on this subject and a consideration of the various theories which have been advanced to explain this murmur. The various points are illustrated by numerous clinical observations made by the writer at von Winckel's clinic in Munich. He found that the blood pressure in the umbilical arteries averaged seventy-three mm. Hg. There are no valves in the umbilical vein but the arteries occasionally show indications of them. The chief and sole cause of the umbilical souffle is a narrowing of the cord. This is due in the great majority of cases to compression. It may be the result of an abnormally short cord or from one excessively long. The latter is apt to form knots, torsion, etc. A deficiency of Wharton's jelly is a predisposing cause. In rare cases the stenosis is due to anatomical change in the vessels. The presence of the murmur *intra graviditatem* and *partum* has no practical importance. If the murmur grows louder towards the close of labor, it is an indication of danger to the child. The mortality to the infant where a murmur existed was ten and three-tenths per cent. In such cases the author recommends that the labor be hastened.

Experimental and Critical Consideration of Eclampsia (Experimentelle und kritsche Beiträge zur Eklampsie-frage.)

BLUMREICH. *Centralblatt für innere Medicin, 1902, No. 2.*

The pathognomonic symptom of eclampsia is the convulsion. This may be due either to an abnormal irritation of the motor centres, to an increased irritability of these centres or to a combination of both factors. While the action of abnormal irritants has been very thoroughly investigated, the second condition has been very little considered. Blumreich therefore sought to determine experimentally whether the nerve centres of eclamptic pregnant animals were more irritable than those of healthy animals. Guinea pigs were employed for experiments and the motor centres were exposed by trephining. Creatin was used as the irritant. He found that in pregnant animals convulsions were regularly induced by creatin, while in non-pregnant animals they were not induced, or only after very large doses. In a second series of experiments soluble creatin was injected into the carotids and the same characteristic difference was observed.

From these experiments the conclusion was drawn that the brain of a pregnant animal was more easily irritated than that of a non-pregnant animal. As to the cause of eclampsia there are three theories. The first makes it identical with uræmia. This theory has, however, no anatomical basis. Schmörl found in seventy-two out of seventy-three cases of eclampsia, a characteristic anatomical picture. This was a hemorrhagic necrosis of the liver and multiple necroses in the abdominal vessels, a condition never found in uræmia. The second theory regarded eclampsia as an auto-intoxication, a poisoning by some intermediate product of metamorphosis. This theory has, however, never gone beyond the stage of hypothesis.

The third theory, which has received much support, attributes the eclampsia to poisoning by the fœtus. The albumins, which are broken up in the fœtus, act in a toxic manner upon the maternal organism. The writer takes exception to this and cites the fact that the total output of urea in a fully developed fœtus is 1 4 grams, while that of an adult is 35 grams, or a total of 36.5 grams, an increase to which the organism is equal.

The argument that the fœtal products are especially toxic because they pass directly into the vena cava has not much force, since the maternal products, with the exception of the intestines, pass into the veins. Blumreich finally performed double nephrectomy upon thirty pregnant and non-pregnant guinea pigs without obtaining any marked difference. He concludes that the poison inducing the convulsions is not purely uræmic.

The Prophylaxis of Mastitis. (Zur Prophylaxe der Mastitis.)

A. Müry. *Beiträge zur Geburtshülfe und Gynæcologie, Band 5, Heft 1.*

Müry describes an epidemic of mastitis in the gynæcological clinic of Basel University due to the invasion of the staphylococcus pyogenes aureus brought about by the uncleanliness of the nurse who had assisted previously in the dressing of a suppurating abscess of the breast. Thereafter prophylactic measures were instituted resulting in the reduction of the percentage of cases of mastitis from one and forty-five hundredths to twenty-two hundredths per cent., and of the last 2,269 cases to zero.

Prophylactic measures should be begun during pregnancy. Alcohol, rum and other astringents should be avoided. Simply washing the nipple and surounding surface with soap and water and applying some lubricant such as sterilized lanolin is all that is necessary before the birth of the child. The application of creolin, orthoformalcohol, sub-acetate of lead or corrosive sublimate is unnecessary and sometimes injurious, especially to the child. Müry recommends the washing of the breasts, especially about the nipples, with a saturated solution of boracic acid, loosening any scabs or scales by the use of vaseline. A small pad of gauze saturated with a four per cent. solution of boracic acid is then applied over each nipple, over which is placed a gutta percha covering and over both breasts a sterilized gauze pad. At each nursing the gauze over one breast is removed, washed with a saturated solution of boracic acid again, as well as the baby's mouth, and again after the nursing. The same precautions are taken day and night.

DERMATOLOGY

Edited by F. C. Curtis, M. D.

Concerning Rhinoscleroma. (Ueber Rhinoscleroma).

Róna. *Archiv für Dermatologie und Syphilis Bd. 46, C. 256.*

The author states that twenty-one cases or rhinoscleroma have been observed in Hungary, so that that country occupies fourth place in the frequency of its occurrence, the order being Russia, Austria, Central America and Hungary. The author has observed a number of cases, some of them being atypical. In one there was an extensive localized swelling of the lymphatic glands. The microscopic examination of these glands showed the presence of a subacute inflammatory process. They contained a lymph which made a good culture medium for scleroma bacilli. Culture media in which blood and lymph from the healthy neighborhood of the diseased area had been placed, remained sterile, as did culture media inoculated with venous blood. Autoinoculation gave negative results even after months.

The Treatment of Pruritis Senilis (*Zur Behandlung des Pruritus senilis.*)

JAENICKE. *Centralblatt für innere Medicin, December 1, 1900.*

Pruritus senilis is an affection which tries the patience of patient and physician and is difficult to treat. It disturbs the rest so as to reduce the patient physically and to depress him mentally. On account of its long duration it is one of the worst enemies of old age, since it is always curable and the remissions due to internal or local treatment are of short duration. This condition receives little attention from text books because on account of its long duration and because nothing is complained of or visible by day, it is thought of trifling importance. The writer's treatment does not produce a cure, but intermissions which last for a month at a time. The condition of the skin of these patients is characteristic. It is very dry and shriveled and seems badly nourished. The treatment consists in rubbing off this dead skin with a brush, which is applied three times daily for ten to twenty minutes. The frequency of brushing is gradually diminished until it is done only every two or three days. After brushing, the skin is rubbed with lanolin. The writer has treated for the last twelve years a number of cases with uniformly good results.

The Curability of Syphilis (*Author's Abstract*).

WILLIAM S. GOTTHEIL. *International Medical Magazine, October, 1901.*

Speaking of the curability of syphilis in the symposium upon that disease in the October number of the *International Medical Magazine,* William S. Gottheil takes exception to the opinion of its practical incurability which is prevalent in certain quarters. Every day experience shows that the great majority of cases are cured in every practical sense, the occasional late relapses and accidents to the contrary, notwithstanding. He concludes:

1. Syphilis is a curable disease, and may even, with restrictions, be called a self limited one.

2. Whilst cure in a given case cannot be affirmed with scientific accuracy, the chances of its being the fact after a certain time under proper treatment are so great that it may be properly claimed to have been affected.

3. Practically, a patient who has been properly treated throughout the active stages of the disease, and who has had no manifestations of its persistance for several years thereafter, may be regarded as cured, and may be told so.

Dermatitis Herpetiformis. (Author's Abstract.)

WILLIAM S. GOTTHEILL. *Archives of Pediatrics, June, 1901.*

Dermatitis Herpetiformis, first described by Professor Duhring, of Philadelphia, is probably of commoner occurrence than is generally supposed, more especially in children. Two cases are described. The resemblance at first sight to an ordinary eczema, dermatitis, or impetigo so is marked, and doubtless cases of the disease are not infrequently so classified. The points which distinguish the less common affection are:

1. The extreme obstinacy and chronicity of the malady; it being prolonged almost indefinitely by successive exacerbations or relapses.
2. Its original herpetic character and subsequent multiformity of lesion.
3. The intense pruritus.
4. Its recalcitrancy to treatment.

Any apparent eczema, dermatitis, or impetigo in children presenting these features should be carefully observed; a certain number of them will undoubtedly be found to be cases of Duhring's disease.

OPHTHALMOLOGY

Edited by C. M. Culver, M. D.

Acute Glaucoma After the Use of Cocain, with Remarks on the Use of Holocain in Glaucoma.

JAMES HINSHELWOOD. *London Ophthalmic Review, November, 1900.*

At the meeting in 1897, at Heidelberg, of the International Ophthalmological Society, Groenouw, of Breslau, advocated the use of cocain, as a therapeutic agent, in cases of glaucoma. Early in 1898, Dr. Hinschelwood was consulted by a woman aged fifty, of very neurotic temperament, complaining of headache after prolonged use of eyes. The headaches were accompanied by dimness of vision which, after a night's rest, disappeared as did the headaches. She was very hyperopic, was wearing an incomplete correction of that refractive deficit and Dr. Hinschelwood naturally thought the case one of asthenopia from excessive eye-strain. The tension of each globe was normal and the pupils so small as to prevent satisfactory ophthalmoscopic examination of the fundi. Because of her neurotic temperament, he refrained from using homatropin to dilate the pupils, and did use a two per cent. solution of cocain. Nothing abnormal about the disc or the rest of the fundus was revealed. By the next morning her case was a typic one of acute glaucoma. An iridectomy relieved her pain. Normal visual acuity was never regained, the eye having been permanently damaged by the acute attack. In the author's words: "There can be little doubt that the dilation of the pupil with the cocain was the immediate cause of this attack of acute glaucoma in an eye already predisposed to it." Only the right eye had been so affected. Holocain can now replace cocain, in glaucoma, as an anesthetic or with any other purpose. It neither augments the intraocular tension nor dilates the pupils. It increases the rapidity and intensity of the action of eserin. It is five times as poisonous as cocain. It is best to us it a few minutes before the eserin, rather than combine the two. For the relief of pain accompanied by increased tension, holocain is pre-eminently the drug, for not only is there no risk of further increasing the tension, but its anesthetic effects are decidedly greater than are those of cocain.

Remarks on Phlyctenular Conjunctivitis.

DONALDSON. *London Ophthalmic Review, April, 1901.*

Climate and weather influence the course of phlyctenular conjunctivitis, which may be regarded as eczema of the conjunctiva. As to consideration of this fact, there are several view-points and methods.

Patients' histories may be investigated, inquiry may be made as to its greater prevalence in winter or summer, information as to its geographical distribution may be sought and its relationship with eczema may be considered.

When investigating case histories, the too frequent and often groundless tendency to ascribe ailments to taking cold, must be borne in mind. The author cites one history, of a kind which, he says, cannot be ignored. A boy, seven years old, had had phlyctenular conjunctivitis for six months, the affected eye being somewhat better, sometimes worse. His mother said that if he went barefoot to school, the eye was sure to be worse. There existed considerable photophobia, and there was a small phlyctenule near the centre of the cornea. The external nares were eczematous. Apart from his eye trouble, the boy seemed healthy and well-developed. Many years ago William Mackenzie wrote that climate influenced the course of this disease. He said that the variable climate of Great Britain promoted this malady, while in inland Italy, even though the people there were poorest and their food least digestible or nutritious, it was rare. Also that when the weather became suddenly cold and wet, a sufferer from phlyctenular conjunctivitis was nearly sure to have the disease made worse by such change in the weather.

The author says that in prolonged cases, relapses are said by patients to recur much more frequently in winter than in summer. Some of the worst cases come under observation in mid-summer, but this is not a reason, in a variable climate, for excluding the influence of cold and wet. Horner and others claim a close relationship between phlyctenulæ and eczema; if that opinion be tenable, further evidence of the influence of cold is deducible from the testimony of dermatologists, to the effect that cold has a strong influence on eczema.

In the sixth edition of Nettleship's work on diseases of the eye, he says: "Cases are much influenced by climate and weather." Other factors, as the general health of the sufferers, are of more importance and, in treatment, out-door exercise is prescribed, notwithstanding the exposure to cold which is often involved. The ill effects of wet and cold should be provided against, in so far as possible, by the use of proper clothing and other precautions. Three symptoms, spasmodic closure of the eyelids, photophobia and excessive lacrimation, always occur conjointly; are usually well marked when the cornea is the seat of this affection. The closure of the lids is a reflex act. The irritation, produced by the round cells, which go to make up the phlyctenulæ, acting on the fifth nerve in the cornea, is conveyed to the nerve centre and thence to the seventh nerve. Light acting on the optic nerve also produces, reflexly, closure of the eyelids.

Intolerance of light is very difficult to explain. Patients suffering from this disease adopt every device for keeping out even the smallest quantity of light. Anyone can prove for himself, by experiment, that a little light passes through the gently-closed eyelids, less still through the tightly-closed eyelids, and none when the eyes are closed tightly and covered with the hands. The least light causes pain and is avoided as much as possible. The optic nerve is not, as a rule, very sensitive to pain. How, then, do we explain that light in these cases is intolerable? One view is that the irritation of the fifth nerve, by the morbid process in the cornea, so acts on the visual centres as to make them abnormally sensitive. This view takes for granted that there is a close connection between the centres of the fifth and the optic nerves. Another theory is that the stimulus, produced by light falling on the retina, is transferred to the fifth nerve in the cornea, and, this being in a very sensitive state by reason of the morbid process, causes pain. This view derives some support from a not uncommon clinical experience. When the eyelids, of a patient with phlyctenular conjunctivitis, are forcibly opened and light admitted to the eye, sneezing sometimes results. The stumulus produced by light is radiated to the nose, where a tickling sensation is felt, which produces, reflexly, sneezing.

The intolerance of light is maintained by the spasmodic closure of the eyelids. We know that if a person in perfect health passes from a place which is dark into another which is brightly illuminated, he will get a slight attack of photophobia. In the same way, if these patients become accustomed to darkness, they will find much difficulty in bearing the light. Malnutrition keeps the nerve centres in an irritable state and prolongs the photophobia. That most of these patients are "out of condition" is shown, among other things, by the state of the hair, which, when rolled between the fingers, is found to be dry and harsh.

The lacrimation is brought about reflexly, the optic and the fifth being the afferent nerves.

It is remarkable that the three symptoms we are discussing improve during the afternoon. A child, who, in the morning, keeps his eyes tightly shut with the knuckles clenched against them, will later in day open the eyes and play about. If the nerve centres are more stable in the later, than in the earlier, part of the day, we could in this way account for the improvement. That these centres vary in their sensitiveness is shown by the good effects produced by cold douches.

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ALBANY MEDICAL ANNALS

Original Communications

THE INFLUENCE OF THE DISCOVERY OF THE RELATION OF BACTERIA TO DISEASE ON THE PRACTICE OF MEDICINE EXCLUSIVE OF SURGERY.

AWARDED THE SCHUYLER ALUMNI PRIZE FOR 1901.

BY H. JUDSON LIPES, M. D.,

Lecturer on Obstetrics, Albany Medical College; Obstetrician to the Albany Guild for the Care of the Sick Poor.

Bacteriology as a science is of comparatively recent development although the foundation of the study of vegetable and other micro-organisms was laid over two centuries ago.

Bacteria

The organisms known as bacteria were first regarded as highly complicated "infusion-animals" (Ehrenberg, 1838) while later they came to be looked upon as quite simple vegetable organisms, consisting merely of protoplasm and of a membrane. While the bacterial cells are certainly not the simplest form of cell that may be conceived to exist they are members of the lowest group of the plant kingdom. They arouse special interest by the fact that bacteria are those organisms which research has brought into relation with the questions of spontaneous generation, fermentation and decay, and the origin of disease. It was the consideration of the most important questions of biology and pathology, of science and medicine, that first directed attention toward bacteria.

In the early study of bacterial forms certain kinds with marked characteristics were found in connection with various specific diseases and specific decompositions.

Relation of the Study of Bacteriology to Medicine

The germ theory of disease is the revolutionizing factor in medicine. Therapeutics has been changed by its discovery from an empirical to a logical method of cure. Marvelous possibilities in surgery have been opened up as the result, and, best of all, it has explained to us the methods of disease transmission, revolutionizing our ideas of hygiene, sanitation and preventive medicine.

From the earliest times the history of bacteriology has been intimately associated with that of medicine. Indeed, it is only through the investigations into the life-history of micro-organisms in their relation to disease that our present knowledge of the etiology, course, and prevention of the infectious diseases has been acquired; and it is only by the practical application of the principles and methods of bacteriology that many diseases can be positively diagnosed or the problems which present themselves to the sanitarian be certainly solved. The prominent position which bacteriology already holds toward medicine is, moreover, daily increasing in importance. Original discoveries are constantly being added to the list of known germ diseases, and the outlook is favorable for eventually obtaining through serums, or through the toxic substances of the micro-organisms themselves, means for immunizing against, if not curing, many of the specific infections. Even at present, bacterial products and protective serums are used successfully as preventatives in many of the infectious diseases and as a cure in several. An acquaintance, therefore, with the main facts and results of bacteriology is as necessary to the education of the modern physician as a knowledge of anatomy, pathology, chemistry or any of the allied sciences.

But before entering into a detailed consideration of the subject, it may be interesting and instructive to review briefly the most important steps which led up to the development of the science, and upon which its fountation rests, in which we shall see that the vast results obtained by bacteriology were gained only through long and laborious research and after many obstacles were met and overcome by indomitable perseverence and accurate observation and experiment.

Origin of Bacteria

The query is often raised by the laity as to whether the present scourge of mankind—bacteria—existed prior to present times. If we are to consider the nebular hypothesis of the origin of the solar system we may believe that the first living things existing upon our earth must have been able to subsist under conditions greatly differing from those which are present to-day. The atmosphere of earlier times must have contained less oxygen, while less light but greater heat prevailed. We now recognize certain forms of bacteria which are able to exist without oxygen, without light and at a considerable degree of heat. Other than these microscopical bodies there are no organisms which can exist under similar conditions and we are therefore led to believe that bacteria existed before higher forms developed and, according to laws of evolution, they may have had much to do with the development of higher forms.

Cause of Disease

The idea that flies, mosquitoes and even quite invisible bodies, were the cause of disease is not new and can be traced back to very ancient times. The first conception of this subject known to us was manifested in the establishment of the Prince of Devils—Beelzebub—the Deity, as the name implies, of visible or invisible poisonous flies that brought disease.

Marsh fever was supposed in earlier times (and the idea is still prevalent in the minds of many) to be due to emanations or injurious gaseous substances derived from lowlands and swamps.

The theory of the cause of disease was perhaps first proclaimed by the Roman writer, Varro, who said that, "as we recognize with the naked eye both large and small insects hovering over marshes, so insects still smaller are able to exist, and these forms, so small as to be invisible, might perhaps be the cause of marsh fever."

Paracelsus also had a dim foreshadowing of the truth when he spoke of the "seeds of disease." For many years this embryonic theory was lost and did not appear again until the latter part of the seventeenth century.

History of Bacteriology

The first authentic observation of living microscopical organisms, of which there is any record, are are those of the Jesuit Athanasius Kircher, in 1671. With a simple lens he discovered "minute living worms" by his investigations of the process of putrefaction of meat, milk, vinegar, *et cetera,* and although he gave no description of their form or character he was subsequently the first to develop in a more comprehensive fashion the theory of a *contagium animatum.*

In the latter part of the seventeenth century (September, 1675) Van Leeuwenhoeck, a Hollander, known as the father of Micrography, was the first really to discover the "world of the infinitely little." He was a polisher of lenses and by the arrangement of several simple lenses he was able to discover living motile organisms in rain water, intestinal secretions of animals, *et cetera.* He showed a picture before the Royal Society of undoubted bacteria and observed and described the motility of organisms, saw cocci and probably spirilla. He termed them *infusion animals.* No conclusions were drawn, however, as to the status of these organisms in nature but he observed that we drink bacteria in water, which, although small, cannot penetrate into the blood.

Van Leeuwenhoeck's successors described and classified these "infusion animals" and his discovery was quickly made known and used as the explanation for many diseases.

From the earliest investigations into the life-history and properties of bacteria these micro-organisms have been thought to play an important part in the causation of infectious diseases. The doctrine of *contagium animatum* was based upon the discoveries of Kircher and Van Leeuwenhoeck, and the "animalculæ" then observed in organic materials were believed to be the cause of the great epidemics of the day, such as the plague. Shortly after these first investigations, Lange and Hauptman advanced the opinion that puerperal fever, measles, small-pox, typus, pleurisy, epilepsy, gout and many other diseases were due to animal contagion and Nicholas Audry and Linné thought that small-pox and venereal disease were caused by these organisms and that Audry cured himself of the latter disease by killing the worms with mercury.

In 1718 Lancise assumed the same cause for malaria. In fact so widespread became the belief in a causal relation of these minute organisms to disease that it soon amounted to a veritable craze, and all forms and kinds of diseases were said to be produced in this way, upon no other foundation than that these organisms had been found in the mouth and intestinal contents of men and animals, and in water.

Nearly a century elapsed before the subject was again considered and before any attempt was made to define the character of these minute organisms and to classify them. The first to make such an effort was Otto Friedrich Müller, of Copenhagen, who applied many of the names we still use and he established, as well, genera which are still recognized. He called these microscopic organisms *Infusoria* instead of vegetable forms, and thus made the mistake which aroused considerable debate and misunderstanding since the *infusoria* are unicellular animal organisms.

Spontaneous Generation of Bacteria.—During the eighteenth century the question of spontaneous generation of bacteria arose. The theory of the spontaneous generation of insects had been previously overthrown by Swammerdam (in 1669) and the whole subject was gone over again in relation to the more minute bodies —the bacteria. The conclusions of Needham, who experimented on the spontaneous generation of "infusion animals," met with general acceptance until Spallanzani (1769), the greatest experimenter of his age, overthrew his claim so completely that Appert (1809) was able to devise a successful method for the preservation of food materials on the basis of their work. This was the first practical result of the older bacteriology.

New opponents continued to arise until Franz Schulze (1836), Schwann (1837), Schröder and Von Dusch (1854-1861), Van der Broek (1857) and Pasteur (from 1857 onwards) overthrew by conclusive evidence every argument for spontaneous generation and demonstrated that all microbes arise by legitimate descent out of germs of the same kind. Harvey's law, *Omne vivum ex ovo,* was therefore fully established. Perty was the first to show that the bacteria belong to the vegetable and not to the animal kingdom. The fundamental work of Ferdinand Cohn gave the idea a further blow.

Advances in the first half of the Nineteenth Century

The principal advance in the first half of the nineteenth century was the demonstration of the fact that the bacteria stood in a certain relation to the most highly organized beings, especially to man. Stimulated by the establishment of the fact that fermentation and putrefaction were due to the action of living organisms reproduced from similar pre-existing forms, the study of the causal relation of these micro-organisms to disease was taken up with renewed vigor. Reference has already been made to the opinions and hypotheses of the earlier observers as to the microbic origin of infectious diseases. The first positive grounds, however, for this doctrine, founded upon actual experiment, were the investigations into the cause of certain diseases in insects and plants. Thus Bassi, in 1837, demonstrated that a fatal infectious malady of the silk-worm—*muscardine*—was due to a parasitic micro-organism. Pasteur later devoted several years study to an exhaustive investigation into the same subject; and in like manner Tulasse, in 1864, and Kühne, in 1855, showed that certain specific affections in grains and vegetables, *e. g.* in the potato, were due to the invasion of parasites.

Very soon after this it was demonstrated that micro-organisms were the cause of certain infectious diseases in man and the higher animals.

Bacteriological research has always been of special interest to physicians. Many of the most distinguished physicians of the day, in the earlier history of the science, concerned themselves in these investigations, and the progress made during the last ten to twenty years has been largely due to their work.

Discovery of anthrax bacillus.—Davaine, a famous French physician, has the honor of having first demonstrated the causal relation of a micro-organism to a specific infectious disease in man and animals. The anthrax bacillus was discovered in the blood of animals, dying from this disease, by Pollender, in 1849, and by Davaine in 1850; but it was not until 1863 that the last named observer demonstrated by inoculation experiments that the bacillus was the cause of anthrax. These experiments were subsequently confirmed by Pasteur, Koch and others.

Koch advanced this line of work in a remarkable degree by the methods he devised about 1880. One of the greatest services that he has rendered to bacteriology, is his invention of methods of pure culture on solid media by means of which such isolated colonies, originating from a single germ, can be cultivated at will and obtained free from any admixture with germs of any other kinds. The isolation of pure cultures of a large number of microparasites was achieved and in many cases it was demonstrated by successful transfer to animals that the microbes had great significance in the origination of those diseases in which they were observed. In this series of investigations, Koch's discovery in 1882 of the germs of tuberculosis stands out conspicuously as especially epochal.

Prior to Koch's discovery many original investigators were busy in other directions. Obermeier, in 1873, discovered the spirochaete of relapsing fever. Von Recklinghausen, Waldeyer, Klebs and Weigert had already found bacteria in the tissues in various diseases when Koch in 1878 published his investigations upon wound infections. According to his conclusions every special disease had corresponding to it a special disease germ just as there appeared to be a special germ for each fermentation. Pasteur's conprehensive work had built the foundation for the conception that each special fermentation and disease was causally dependent upon a special micro-organism. The brilliant results which Lord Lister obtained, in 1863-1870, in the antiseptic treatment of wounds, to prevent or inhibit the action of infective organisms, exerted a powerful influence on the doctrine of bacterial infections, causing it to be recognized far and wide and gradually lessening the number of its opponents.

Neisser, in 1879, discovered the "gonococcus" in gonorrroeal discharges. In 1880, Eberth and Koch independently observed the typhoid bacillus, but it was not until 1884 that Gaffky published his important researches, and proved the etiological relation of this bacillus to typhoid fever.

Sternberg and Pasteur independently observed (1880) a pathogenic micrococcus in saliva, which was subsequently proved by Fränkel and others (1885) to be the organism most commonly associated with acute croupous pneumonia and now recognized as the usual cause of that disease.

The year 1882, made memorable by Koch's discovery of the tubercle bacillus, will also be remembered as the year when Pasteur published his investigations upon "rouget" or hog erysipelas. In this year, also, his first communication upon rabies appeared. In 1882, also, Loeffler and Schütz discovered the bacillus of glanders.

In 1884, Koch discovered the cholera spirillum, and Loeffler the diphtheria bacillus, though it had been observed by Klebs the year before. The tetanus bacillus was also discovered in 1884 by Nicolaier, although it was not until 1889 that it was obtained in pure culture by Kitasato.

In 1892, Pfeiffer and Canon independently discovered a bacillus which is believed to be the specific cause of influenza.

These include some of the most important pathogenic bacteria, the discovery of which is of special interest to us, although under the subject of Etiology we shall refer more particularly to them as well as others.

(To be continued)

Clinical and Pathological Notes

Muscular Anomaly: Complete Absence of the Long Tendon of the Biceps Muscle of the Left Arm. *By* Joseph D. Craig, M. D., *Albany Medical College.*

I desire to put on record an unusual muscular anomaly found in a middle age, male subject, in the dissecting room of the Albany Medical College.

The anomaly consisted in the complete absence of the long tendon of the biceps humeri muscle, upon the left side. The usual arrangement of the tendons of this muscle was found upon the right side. There was no trace of the long tendon of the biceps muscle on the left side, either at the usual point of junction with the belly of the biceps muscle or at any point up to the usual origin of the long tendon. The bicipital groove was somewhat shallow, was filled in with white fibrous connective tissue, and did not have the usual transverse strengthening bands, commonly called the transverse ligament. Within the joint cavity no tendon was to be found, but projecting downward from above as part of the capsular ligament, was found a poorly developed gleno-humeral ligament. The supra-glenoid tubercle was not present.

The shorter head was broader and larger and of very much more extensive origin than is usual. The coraco-brachialis muscle was large and between this muscle and the short tendon of the biceps was an unusually large and strong inter-muscular septum. In addition to an attachment to the apex, the inner border and the superior surface of the coracoid process of the scapula, the muscular fibres came also from a thick, strong and broad aponeurosis of origin which was placed upon the superficial surface of the muscle. The short tendon had an origin also from the deep fascia. From the border of this aponeurosis passed outward a very thick and strong fibrous extension which gradually lost itself in the deep fascia about the shoulder joint.

The condition seems to be so rare as to be worthy of record.

ASSOCIATION OF THE ALUMNI OF THE ALBANY MEDICAL COLLEGE — TWENTY-NINTH ANNUAL MEETING.

The twenty-ninth annual meeting of the Association of the Alumni of the Albany Medical College was held in the Alumni Hall on Wednesday, May 6, 1902. The usual informal reception was held in the college library, where photographs were exhibited and greetings exchanged, between the hours of 9 and 10:30 A. M. Provision for the reunion of the decennial classes had been made by the assignment of the various rooms of the college for the separate classes, and before the general meeting the classes of '72, '82 and '92 met for the reports of the class historians and for renewals of college acquaintance. The annual meeting was called to order by the President, Dr. Clarkson C. Schuyler ('75), of Plattsburgh, N. Y., at half past ten oclock.

The following members of the Association, with invited guests, students of the college and others interested were present: Henry D. Wells, ('57); Herman Bendell, Albert Vander Veer, ('62); Alfred B. Huested, ('63); Daniel C. Case, Willis G. Tucker, ('70); Gebhard L. Ullman, ('71); George S. LaMoree, ('72); Daniel H. Cook, ('73); Henry E. Mereness, Thomas Wilson, ('74); Franklin P. Beard, Clarkson C. Schuyler, ('75); F. L. Classen, Charles A. Ingraham, Henry Lilienthal, George P. K. Pomeroy, William O. Stillman, ('78); Osman F. Kinloch, ('79); Clinton B. Herrick, ('80); George Hudson, Edgar E. Maryott, Horace R. Powell, William B. Sabin, Walter W. Scofield, ('82); Robert Babcock, ('84); Martin MacHarg, E. Hudson Rider, ('85); Hermon C. Gordinier, John A. Cutter, ('86); Willis G. Macdonald, Andrew MacFarlane, Charles H. Moore, Herman V. Mynderse, ('87); John Archibold, G. Emory Lochner, ('88); J. Montgomery Mosher, William Van Doren, ('89); Thomas H. Flynn, William H. Happel, Arthur G. Root, ('90); Walter H. Conley, Charles E. Davis, Robert W. Lamb, James W. Wiltse, ('91); Frederick J. Cox, Washington I. Goewey, John B. Grover, Robert A. Heenan, William G. Lewi, Howard E. Lomax, Frederick A. Mead, Charles B. Mosher, Leo H. Neuman, Clement F. Theisen, Lansing Van Auken, ('92); Percy G. Waller, ('93); Eugene H. Goodfellow, ('94); Garrett V. Johnson, Henry L. K. Shaw, ('96); Robert L. Ellithorpe, H. Judson Lipes, Garrett W. Timmers, ('97); Alvah H. Traver, Edgar A. Vander Veer, ('98); George H. Fish, James H. Flynn, Eugene E. Hinman, Walter A. Leonard, Edward S. Smith, Edgar R. Stillman, ('99); Thomas H. Cunningham, Howard A. LaMoure, ('00); Arthur J. Bedell, Robert B. Castree, Joseph A. Cox, Thomas E. Deveny, Gerard Griffin, John M. Griffin, Michael J. Thornton, Leland O. White, ('01); Thomas Carney, Eugene Champlin, A. M. Cox, August J. Freutel, John H. Gutmann, Joseph Mark, Edwin A. Mason, Fred C. Reed, Charles P. Wagner, G. Van V. Warner, ('02); George Blumer, Frederic C. Curtis, Lyman S. Dawes, Arthur W. Elting, Henry Hun, Cyrus S. Merrill, Samuel R. Morrow, Howard Van Rensselaer, (Hon.).

The President introduced Professor Frederic C. Curtis, M. D., who delivered the following address of welcome to the alumni on behalf of the college faculty:

Address of Welcome

Mr. President and Members of the Alumni Association:

It is my good fortune, by the favor of my associates in the Faculty, to extend to you this morning a welcome again to the college halls and to this annual reunion. You have found compensation for coming before or you would not be here now, and I hope to-day will bring you its recompense. The technical schools do not as a rule keep that hold upon those who receive their training in them that the literary institutions do. The students are beyond their youthful, formative period; the class associations are not as close; they do not come together from the same environment, and in their post-graduate life they are more widely scattered. A man never loses the yearning to get back to his boyhood life, and especially to that period of it when more than any other he got the indelible stamp on his character and mingled for years in common tasks and common diversions which fellows of his class in academy and college. There were some among his teachers, at least he was fortunate if there were, who looked to him like Olympian deities to whose stature he never anticipated the possibility of attainment, and even the men in the upper classes he looked upon as almost heroic in greatness. Do you remember one of Thackeray's characters who even in his later life never overcame the feeling of awe which had been early and indelibly inspired by his schoolmaster? This impressibility of youth lessens as we advance in years; in the medical college it can hardly be possible. Maturity brings us nearer to a level and remiscence has a feebler glamour and loses its Claude Lorraine effects. Still, most of us were boys in the medical college, we retained yet the boyhood qualities to a degree, it was still a formative period and we associated with those like us in common tasks. And reminiscence seldom loses the happy quality of veiling the hard and disagreeable and preserving the pleasant and sweet. So I have no hesitation in asking you to take the occasion we are now celebrating as one of welcome pleasure. As touching the chords of the "Moonlight Sonata" the old man becomes again a lover, so may now a spell be woven by this reunion for a day which will wipe out passing years and make you all boys again.

The cares of the active practicing physician are exacting and laborious. Anxious responsibilities, which a sensitive and conscientious man cannot help feeling, have to be assumed; and a jealous regard for professional reputation adds to the solicitude. Medical men have to endure physical toil which falls to the lot of few others—work which comes at night and makes no hour his own—long rides to the country practitioner in all weather; as Holmes has put it, "no nights, no Sundays, but an eternal jog, jog, till you feel like the memory of a dead Indian who has been buried in a sitting position and dug up after a hundred years." You are always on duty like a fireman and any moment may precipitate you into a strenuous struggle to hold back the hand of death, it may be from a pauper or it may be from a President. And your combat is largely single-handed; as one of your own number once put it in a commencement address, the loneliness of your work is sometimes appalling. It is work of a kind into which those about you cannot enter. In a recent discussion on diabetes it was noted by one that this disease is especially frequent among medical men, and to the query as to why this is so the answer suggested was that it is because of the strain of anxiety. I remarked, lightly, to the man next me, "Surgeons are not often troubled with it, are they?" He replied, "Well, I haven't slept much the last two nights over one of my cases." But with all, few men enter the profession and turn back. There is something in its uniqueness that holds men to it; something perhaps of its very soldierly quality. The surgeon I just referred to had gone boldly into an abdominal cavity, grasped a bleeding point where life was rapidly pouring away and stopped it.

It is a great work in all its directions of application, with much of course that is commonplace and of moderate attainment, but on the whole doing more for human good and need than almost any other. It is worth a reflection at just such occasions as this. And if other people must of necessity stand outside, the doctor can relieve his loneliness by sympathetic association with those of his own guild. That very thing makes these associations more vital and important. Every man should be a hearty upholder of his medical societies, local especially, for the good of himself and the whole profession with which he comes in touch. And more social bodies, such as this Alumni Association, have their own value.

The college always profits by Alumni reunions. It has a body of graduates of whom it has good reason to be proud, and it is very desirous of maintaining the interest and good will of every one of them. The body of under-graduate students do not constitute an institution of learning; it consists to a great degree of the large invisible body formed by its alumni. They stand for its work, and the character of its work is determined and the reputation it establishes is constructed out of the average quality of the men scattered throughout the land who got their professional inpulse from it. It is good for the college to have the Alumni get together and remind themselves that each one is an integral part of it and its fortunes are in a way in your hands.

I have nothing specially new to say about what the college is now doing. Compared with years ago it is of course giving the classes a great deal more; the term is longer, the teaching force larger, and the resources greatly increased. Each year seems to add something, and he ought to be a fairly wise man who has taken the present four-years course with a capacity to digest a good part of what has been put before him.

I am glad to say that our genial and brilliant member, Dr. Hailes, who has so constantly injected the veins of his theme with his own bright humor as you all remember, has improved to good purpose a somewhat prolonged southern sojourn, necessitated by physical illness of a year past, and we shall welcome all his complete recovery if it may be. A keen sense of sadness fills our hearts that Dr. Van Allen, who has long done good work in the college and in your body, is laid aside—a most companionable man, a good helper in every good work, and a worker of high quality in his profession.

Among the students there is a good spirit and enthusiasm for work, and it is a pleasure to work with them. I think their fraternity societies of recent time must make the student life away from home, for many of them, vastly more cheering than when for lack of these social and brotherly bodies life must have been some of the time dreary indeed. There are those of us who can recall with a pang the deprivation we felt when we first exchanged the home life for the necessarily narrower surroundings of the boarding-house with yet unformed friendships. May the good fraternities abundantly flourish.

We are trying to turn out at the end of our years of training well trained men who will honor your body into which they graduate. You will find good men coming to you in the class of 1902. May they, and all of you, always feel impelled to keep a warm spot in your hearts for your old *Alma Mater*—the Albany Medical College.

On motion of Dr. George P. K. Pomeroy, the thanks of the Association were tendered Professor Curtis for his interesting address.

On motion of Dr. James W. Wiltse, the reading of the minutes of the last annual meeting was dispensed with, and the minutes as printed were adopted.

Dr. Joseph D. Craig moved that the President appoint a committee of five to nominate officers for the ensuing year. Carried. The President appointed as such committee: Drs. Joseph D. Craig, ('84); D. C. Case, ('70); Arthur Sautter, ('94); A Vander Veer, ('62); Walter H. Conley, ('91). The committee retired.

The Recording Secretary presented the

REPORT OF THE EXECUTIVE COMMITTEE AND RECORDING SECRETARY

Two meetings of the Executive Committee have been held during the year. At the first meeting, held May 6, 1901, the recording secretary presented the records of the last annual meeting of the Association, including an account of the commencement exercises, and, on motion, this was referred to a printing committee of three members. The retiring treasurer, Dr. William G. Lewi, presented a report, showing a balance on hand of $127.49. The treasurer also stated that the building fund, with interest to date, amounted to $77.46. Dr. Tucker, chairman of the committee on the alumni dinner, presented a report, showing that the receipts from the sale of 102 tickets had been $153, and the disbursements were $243.17, leaving a deficit of $90.17, which had been paid by the college faculty. Dr. Tucker stated that Dr. John C. Brown, a member of the Executive Committee, had authorized him to present his resignation as a member of the committee, and the resignation, on motion, was accepted. An election to fill the vacancy thus created was directed by the chairman, and Dr. William J. Nellis was chosen a member of the committee in the place of Dr. Brown. The manuscript of the successful essay offered in competition for the Schuyler alumni prize was presented by the recording secretary, and the essay was referred to a special committee of three.

At a meeting held February 24, 1902, the distribution of the proceedings of the last annual meeting of the association was reported. Fifteen hundred and fifty copies had been printed and had been mailed to members of the Association whose addresses were known.

The usual arrangements for alumni day were discussed, and the chairman appointed the following committees: on alumni dinner, Drs. Tucker, Nellis, Richardson; on toasts and speakers, Drs. Vander Veer, Mosher, Shaw; reception committee, Drs. Reilly, Neuman, Hinman, Moore, George, MacHarg, Hennessy and Rider. On motion the faculty of the college were invited to participate in the exercises of alumni day, and to appoint a representative to deliver an address of welcome at the opening of the annual meeting. The corresponding secretary was authorized to have the usual notices printed announcing the annual meeting. The motion was also carried that invitations to the annual banquet of the association be sent to each of the undergraduate classes in the college. The special committee on the manuscript of the successful essay offered in competition for the Schuyler prize of 1901, recommended that the essay be published in the ALBANY MEDICAL ANNALS.

On motion of Dr. Andrew MacFarlane, the report was adopted and ordered entered upon the minutes.

The Treasurer, Dr. Robert Babcock, presented his report for the year, as follows:

Treasurer's Report

Cr.

Received from Dr. William G. Lewi, May 1, 1901	$127 49
Dues received to May 1, 1902	11 00
Interest on money in bank to January 1, 1902	3 30
	$141 79

Dr.

Various bills paid, for which vouchers are presented	117 50
Balance on hand May 1, 1902	24 29

The College Building Fund.

At last report this fund amounted to $80.17. Interest to January 1, 1902, $2.84, makes a total of $83.01.

[Signed.] **Robert Babcock,**
Treasurer.

On motion of Dr. James W. Wiltse, the report of the Treasurer was referred to a committee consisting of Drs. J. W. Wiltse, Horace R. Powell and Alvah H. Traver, who examined the same, compared the disbursements with the accompanying vouchers, and subsequently reported it correct. On motion of Dr. Percy G. Waller, the report of the committee was received and the committee discharged, and the report of the Treasurer accepted and ordered placed on file.

The President's address being the next order of business, Dr. Daniel H. Cook, a Vice-President of the Association, was called to the chair, and President Schuyler delivered the following address:

President Schuyler's Address

Fellow Alumni:

A year ago, much to my surprise, I was honored by an election to the highest office in the gift of the Alumni of the Albany Medical College. At that time I endeavored to express my appreciation of the honor bestowed. In my embarrassment I fear inadequacy was apparent. It was to me a felicitous moment, and I thought only of the honor, losing sight of, and being quite blind to the fact, that it meant something more than the mere wielding of the gavel. In other words, it was a case of astigmatism, pure and simple. I failed to appreciate that I saw imperfectly in at least one meridian! Gradually, however, as days came and passed, my vision improved, until lo! an apparition confronted me. Daily it grew more formidable. It was the last thing to fade from view as I closed my eyes at night, and the first thing manifest as the song sparrow and the robin greeted the new born day. It is said that Belshazzar quailed when he saw the flaming words of warning. Well, so I cowered. There held up before my now corrected vision were the words "The President's Address!"

Now, my fellows, I could never understand why doctors cannot come together for a sociable time and interchange of friendly greetings, without being called upon to speak, for they do not belong to the speaking class. They are not like the lawyers who are expected to plead either for the right or wrong, (and it apparently matters not which), nor are they like the clergy who always preach. The doctors only practice, though they sometimes practice that which they do not preach. They are simply the stern quiet soldiers facing the common enemy of humanity, Death, gathering their weapons from the elements of nature, and keeping step in the front rank of science and art.

I am no longer the young man who left these halls twenty-seven years ago, choked, as I thought, to the level of the cricoid, with the theory and practice of medicine. Experience and independent thought long since disposed of that youthful and over-confident practitioner by a well directed blow in the vicinity of the *plexus solaris.* While I may be pardoned for feeling that I am addressing my peers, I feel diffident of my ability to either instruct or entertain you. Please indulge me then in my caprice, and permit me to say whatever comes uppermost as I talk to you.

Has it occurred to you that the profession as a whole is apparently growing from year to year more skeptical on the subject of therapeutics? It seems so to me, and, after a moment's thought, I think you will agree with me. Apparently with many the end has been attained when the diagnosis is made. Nature is expected to do the rest! Losing sight of the fact that there is the wide range of diseases in which physical diagnosis is unavailing and when there are only symptoms to guide our treatment. It may be said that before a patient can be efficiently treated a correct diagnosis must be formed, hence physical signs by aiding us in this respect must likewise aid us in the treatment. This proposition in some measure is no doubt true, but, when we have accurately diagnosed the disease we must in most instances be content to combat the secondary and often fatal effects, and that is just where the therapeutist does efficient work. Not long ago a physician, who could look back upon eighteen years of active practice, had the temerity to say at a medical meeting at which I was present that he did not believe that medicine in any way modified disease! I took him to task by asking why then was he practicing his profession; did he not think he was amenable to the law for obtaining money under false pretenses? Here was a physician whose office was littered with pills, triturates, elixirs, etc., and who was ready to dole them out to anyone who could pay for it, and yet he did not believe in therapeutics. Time and again I have heard practitioners make statements quite as rash and radical as that of the gentleman mentioned. Recently I entertained at my home a young Harvard graduate who had just completed a two years' hospital service, and was about to take up the practice of his profession in an eastern city. He had had exceptional advantages and had stood high at college; he was a close observer and a keen reasoner, and yet this young man confessed to me that he knew nothing, practically, about therapeutics, giving as a reason that that branch of study had been looked upon at college as of less than secondary importance. The Lord help him at the bed-side!

Now, of what is this skepticism born? Are we as a profession fostering the heresy; are our colleges encouraging it? As to the first question there can be, to my mind, no doubt. Unfortunately a knowledge of this fact is not confined to the profession; it has spread to the laity, and that is why the charlatan and the patent medicine man prosper.

The second question, I am not in a position to answer, and yet, it is my belief that to-day almost every branch of medical science is taught at the expense of therapeutics. The etiology, pathology, physical signs and the diagnosis of disease, are fed to the hungry mind of the student in a manner so advanced, so thorough and so comprehensive, that the teachings of twenty-five years ago seem as dead as the Roman city Thamugus. And what of therapeutics? The same old harp is used with possibly a few new strings but the music is but little better! Is it not true? I do not think I exaggerate when I say that there is to-day no field in medicine where patient and conscientious work will be more richly rewarded. True, therapeutics is not all of the science of medicine, and it is not every physician who can be a therapeutist in the true sense of the word, as he must be a man well versed in every department of medicine. And, too, he may be a good *observer* and yet a bad *reasoner*. He cannot practice well unless he is both.

It is the duty of every physician to use his best judgment for everyone who comes to him for treatment, and if the question "What is the best medical treatment known to the world for a case like the one before me," were more frequently asked, therapeutical knowledge would be enhanced. The hunting season in medicine is without restriction, but I would suggest a "closed season" when, by an unwritten law, we are compelled to desist from gunning for bacilli and germ, and to diversify the sport by devoting at least a portion of the time to hunting for possibilities in the field of therapeutics. Then, and not until then, can we hope for the millenium in medicine—that day when medicine will be numbered among the exact sciences.

Thus, briefly, I have called your attention to what I believe to be a growing evil—a drifting from lines upon which a great profession was founded. To some of you it may seem optimistic, that it is the impossible I am hoping or looking for; however, think of it seriously, but do not, I beg of you, try to reconcile what I have said with the mutterings of the pessimist.

And now a word to *The Gentlemen of the Class of 1902:*

Accept my felicitations, and allow me to congratulate you and welcome you to the Alumni fold. It is a remarkable circumstance that in probably five cases out of ten a man's success in life is not found in the career he originally chose for himself, but in another totally different. I take it for granted, however, that *you* have made no mistake and that your choice of a vocation has been a most happy one. Just now you are the "lambs of the flock." Many days will come and go before you will rise, in the estimation of the public, above that of even fairly good mutton. Do not let this, however, discourage or disconcert you. Such want of appreciation is nothing new, I can assure you. It is the same old barbed wire fence, surrounding pastures green, that your elders years ago worked and studied to get through, and *you,* too, must expect a few scratches in making the effort.

The man with a future is always a subject of attractive speculation. He may rise high above the Eiffel Tower of his profession, or he may be found at the end contentedly seated on the hitching post near by. President Roosevelt aptly said the other day, at the dinner of Columbia Alumni, "There is not one of us in a hundred fit to be a productive scholar, but the other ninety-nine are fit to do decent service if we only care to take the pains. If we think we can render this service without taking pains, the value of that service we give will be but little." Your motto should be, *once a student always a student!* You cannot get in the world of science something for nothing. How true it is, that, as a rule, human performance lags ever behind human intention. Stop not, loiter not, look not backward, if you would be among the foremost. The present with its possibilities is yours; too soon you will find it belongs to the past. The "might have been" is the retrospect of declining years. Let me tell you that there is much that you should add to your scientific acquirements, applicable to your every day life as a practitioner of medicine; much that is too frequently overlooked, or not appreciated. First of all, cultivate tact and business sagacity—above all things, tact. Many a worthy physician has failed to achieve practice or reputation because he was deficient in these very qualities. Year after year have been spent by such deserving men, in waiting for a practice, and consequent sphere of professional usefulness, that never came. You will find that intellect, genius, temperance, correct personal habits and other commendable qualities, will all fail, unless you add ambition, self-reliance and aggressiveness to them; but in the effort to advance, take care not to acquire the reputation of being a sharper or being tricky. Resolve that in your efforts you will do nothing that is criminal, nothing that will fail to stand every test, nothing that *you* cannot approve of, with your hand on your heart and your face turned upwards.

Remember that public opinion is the creator, the source of reputation, whether good or bad, and should be respected; for reputation is a large, a very large part of a doctor's stock in trade. Keep out of politics. The physician who dabbles in politics is not likely to be the successful physician, for it may be said, with but little fear of contradiction, that politics and the successful practice of medicine are incompatible. Entertain the greatest respect for the religious beliefs of your patients, and keep your beliefs or disbeliefs to yourself. Be ever ready, not only to allow, but even to advise, under certain circumstances, that patients have spiritual comfort. While you may be skeptical as to the relation of religion to the hereafter, you cannot but recognize that it does good *here;* that the presence of religious faith is a wonderful power, and the physician who does not recognize it lacks the rudiments of observation.

And now just a word to you too, young gentlemen, on the subject of therapeutics. Were one of your number to ask me at this moment to choose for him a subject for special study and research, that subject would be therapeutics; because I conscientiously believe the reward would be more than commensurate with the time, study and research expended, and quite as advantageous to him and beneficial to patient, as the discovery of the source of malarial infection will in the end be to mankind. It has been truthfully said "When you hear a doctor who wishes to be considered especially clear or ahead of others, or extraordinarily fair in his opinions, boasting that he does not believe in drugs, 'depends on nature, etc.,' you can safely conclude that in his zeal to become a medical philosopher he has lapsed in his materia medica or overstates his credulity, or that his usefulness has run to seed." In condemnation of this prevailing heresy I would even be so radical as to suggest to the physician who says, after five years of practice, that he has never seen medicine restore health or prolong life, that he does not seriously believe in his power to benefit by drugs many of the many hundred diseases and modes of decay to which mankind is subject, he should for conscience sake, and for the sake of the afflicted, take down his sign, and no longer pretend to practice—dear old Dr. Oliver Wendell Holmes to the contrary, notwithstanding.

In conclusion I cannot do better than quote from the address of welcome delivered by Professor Merrill on Alumni day a year ago, "To you, young gentlemen, who are so soon to go forth to fight the battle of life I would give as a watchword to be inscribed upon your banners, the word 'Duty.' Study well to learn your duty, to Him who created you, to the loving ones in the home circle, to your fellows in the profession, to the patient who trusts you with his very life, to the community in which you may live and to all the interests of that community, and having learned your duty in all these various relations, *dare* to do it."

Fellow Alumni:

My duties as your presiding officer are nearly ended, soon it will be my pleasure to greet my successor. Thus the years come and go, oh! so quickly! Most of you are the ripened autumnal harvest, gathered to-day in sheaves bound together by the loving cords of your Alma Mater. You have faced the trials and vicissitudes of an exacting profession. Hard withering toil has been yours; you have chased the bubble reputation only to feel it when grasped, break into a hundred lesser bubbles that soar above you again. And yet, who of us would exchange our profession for another? Heroes may boast of their valor and glory in the number of their slain; they may mingle the shouts of triumph with the groans of the dying, and proudly bare away the laurels of victory from the field of carnage, but the glory of medicine consists not in destroying, but in saving life, not in making wounds, but in binding them up, and her proudest chaplets are the spontaneous offerings of grateful hearts.

My friends, I bid you God speed.

The members of the Class of 1902 were present in a body, and rose as the President addressed them at the conclusion of his address, and received them into membership in the Association.

Dr. Willis G. Tucker moved a vote of thanks to the President for his interesting address, a copy of which he was requested to furnish for publication. Vice-President Cook put the motion to a vote, and declared it unanimously carried.

President Schuyler then resumed the chair.

The report of the Historian of the Association, Dr. Pearse, was then presented, in his absence, by Dr. MacFarlane.

REPORT OF THE HISTORIAN, DR. HARRY S. PEARSE

Mr. President and Fellow Members of the Association:

The chief province of the office of Historian is to collect indelible records of the lives of the members of the Association. The college is in the third year of that decade—the seventh—which will obliterate the living link between the birth of the college and the venerable and honorable three score and ten of its years of existence. The mist enveloping the past is now thickening rapidly and very soon we will have only our records to penetrate it; no living tongue will unfold in fascinating reminiscence the noble works of our honored founders or of the works of the first fruits of their efforts, the graduates of the first decade. The class of '40 has passed out of the living and we have only its record. We should be impressed with the fact that it is our duty to make indestructible the records of the children of our Alma Mater and I want to engrave upon the minds of the class historians the great importance of their duties. Their work, if well done, will make a priceless whole. The duty of each member of the Association is as clean cut; without his assistance, the historians are valueless.

The off-shoots of the parent Association are thriving. The Albany Medical College Alumni Association of Greater New York is in its seventh year; the New England Branch of the Alumni Association of the Albany Medical College is in its third, and the Alumni Association of the Albany Hospital Internes will soon be able to stand alone and will be heard from in the future. All of the members of these branches have the welfare of the Association proper deeply at heart.

As an appendix to this report I have collected the records of the members of the Association who served in the Spanish-American War. There are twenty in all and their services reflect great honor upon our College and Association.

It has fallen to me to present the histories of the classes of 1842, 1852 and 1862. The history of the class of 1872 is presented by Dr. John U.

Haynes, of Cohoes, N. Y.; of 1882, by Dr. William B. Sabin, of West Troy, N. Y., and of 1892, by Dr. Fred B. Casey, of Mohawk, N. Y.

The class of 1842 has never been reported upon and to-day—sixty years after graduation, one member is known to be living. Twenty-seven were graduated, eleven are known to have died and fifteen have been lost track of. The living member is Dr. Louis Charrette, of Warrensburg, N. Y. His letter is worthy of a place in the records:

Warrensburg, N. Y., January 31, 1902.

Dear Doctor Pearse:

Dr. Tabor B. Reynolds, of Saratoga, who recently died, and myself, were schoolmates in the Academy at Waterford, N. Y., and subsequently were classmates in the Albany Medical College and graduated together in 1842. In 1840 I moved to Bolton, N. Y., and practiced there for twelve years after graduation. I then moved to Warrensburg, where I have been in practice since. I am not in practice now. I am like an old worn out horse which has out-lived its usefulness. While in Bolton I was elected a supervisor, and while I lived in Warrensburgh I have served several terms as coroner.

Yours very truly,

[Signed.] Louis Charrette.

SERVICES OF MEMBERS OF THE ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE IN THE SPANISH-AMERICAN WAR

By Harry Seymour Pearse, M. D.

Historian of the Association

On page 323 of the Albany Medical Annals for 1899 (Vol. XX) will be found the records of twelve of the members of the Alumni Association who served in the Spanish-American War. These records were published as an appendix to the Historian's report for that year. After careful inquiry the records of twenty have been obtained and it is believed that this number represents all of the members of the Association who served in this war. The records of the remaining eight are given below:

James E. Smith. (Albany, N. Y., class of '89.) Commissioned 2nd lieut., 1st N. Y. V. Inft., May 17, '98. Detailed as Ass't Surg., same regiment, Sept. 20, '98. Went to Honolulu with regiment. Mustered out of service with regiment, Jan., '99.

James E. Brennan. (Albany, N. Y., class of '89. Deceased.) Enlisted as private July 21, '98, at Harrisburg, Pa. Assigned to battery "B," 7th Artillery. Honorably discharged Feb. 27, '99, at Willett's Point, N. Y.

Adolph V. R. Fenwick. (Schenectady, N. Y., class of '99.) Enlisted in hospital corps of the regular army, May 26, '98. Assigned to Tampa, Fla., June 9; sent with Gen. Shafter's command to Cuba and served in the Chief Divisional Hospital at Siboney in the operating room till July 9, when he was transferred to the Yellow Fever Camp two miles and a half from Siboney. Served there till Aug. 24, when he was transferred to the Yellow Fever Hospital at Siboney. Served there till Sept. 3, when he was taken with yellow fever. Recovered. After a furlough, reported for duty at Washington, D. C., Dec. 11, and was assigned to duty in the operating room of the U. S. General Hospital at Washington Barracks. Remained there until discharged from service May 8, '99.

GARRETT V. JOHNSON. (Schenectady, N. Y., class of '96.) Mustered into service in May, '98, at Camp Black, L. I., in 1st N. Y. V. Inft. Went to Honolulu with regiment. Oct. 6, '98, sent from Honolulu to Washington, D. C., on detached service. Mustered out of service Feb., '99.

BERNARD LIVINGSTON. (New York City, class of '99.) Enlisted on July 6, '98, in 203rd N. Y. V. Inft., at Syracuse, N. Y. Two weeks later ordered to Camp Black, L. I. There detailed to field hospital service. In September was transferred to Madison Barracks, Sacket's Harbor, N. Y., with 9th U. S. Inft. There served in the Hospital Corps, where he remained till discharged from service Oct. 27, '98.

JOHN VAN RENSSELAER HOFF. (War Department, Washington, D. C., class of '71.) Major-Surgeon, U. S. A. Was appointed Lieut. Col. and Chief Surgeon, U. S. V., May 9, '98, and detailed a Chief Surgeon, 3rd Army Corps, in which office he continued until that corps was disbanded in November, '98. Was then mustered out as a volunteer and assigned to duty as the Chief Surgeon of Porto Rico. (Major Hoff is one of the most important and able medical officers of the U. S. Army, and has held many important commissions. At present he is one of the Deputy Surgeons General in the War Department at Washington, with the rank of Lieutenant Colonel.)

JAMES P. KIMBALL. (War Department, Washington, D. C., class of '64.) Also a veteran of the Civil War. At the outbreak of the Spanish-American War was stationed at Governor's Island, New York Harbor, as Attending Surgeon, Headquarters, Department of the East. This position he held during the entire war. A large number of the wounded and sick were brought here from Cuba and Porto Rico. This coupled with the facts that this station is one of the principal ones in the East, where furloughs and discharges are given, gave an immense amount of work. "There was no halo of battle for us or stirring campaigns or heroic deeds, such as for the sake of our beloved Alma Mater I should have been glad to have shared in."

LEWIS T. GRIFFITH. (Troy, N. Y., class of '97.) Appointed 1st Lieut. and Ass't Surg., 1st N. Y. Vol. Inft., May 20, 1898. Served as such to Feb. 20, 1899. Appointed Contract Surgeon, U. S. A., in Feb., 1899. Served continuously since first appointed, since March, 1901, in the Philippines. Now Major and Surgeon, U. S. Vols.

Perhaps it is not out of place here to the high rank which some of our graduates have attained and are now holding in the regular army. I refer especially to Dr. Benjamin F. Pope, who recently died in the Philippines after a very short illness of Bright's Disease. At the time of his death Dr. Pope was the ranking surgeon in the Philippines, was one of the Assistant Surgeons General with the rank of Colonel. Dr. James P. Kimball was also one of the Assistant Surgeons General, with the rank of Colonel. Dr. Kimball died in April of this year, a short time after his retirement from active service. Dr. Timothy E. Wilcox, one of the Deputy Surgeons General, with the rank of Lieutenant Colonel. These three graduated in the class of 1864, and served almost continuously in the regular army from the date of their graduation and all were veterans of the Civil War. Dr. John Van Rensselaer Hoff, now one of the Deputy Surgeons General with the rank of Lieutenant Colonel. His excellent record, especially in the Spanish-American War and as Surgeon-in-Chief of Porto Rico, is one which we may well be proud of. Our college has its full quota of officers of high rank in the army and their records we view with pride and satisfaction.

HISTORY OF THE CLASS OF 1852

The age and isolation of the regular Historian of this class places upon me the duty of placing before you the records of the class as they stand to-day—fifty years after graduation. A total of twenty-nine were graduated; out of that number but four are known to be living to-day; we have records of the deaths of thirteen, of the remaining twelve there are no records in our annals. The past decade has made sad inroads; seven are known to have fallen by the wayside during that time. Of the four known to be living, three have responded as follows:

Dr. J. L. Weber, *Leavenworth, Kansas:* After graduating I left the State of New York and I think I never met a graduate of the school while I was in the army and never saw any there, and fifty years, my dear doctor, pretty much sweeps every recollection from memory. I have often thought that I would like to meet the Alumni but, after all, I would be but a stray sheep in the flock; so I may as well consider myself an outsider as far as the Alumni are concerned. I think there is not a professor of the old school living.

I am now seventy-seven years old, still doing business and I shall continue as long as I can go to my office. When the headlight of my train comes around the bend, it will find me with the harness on.

Dr. James G. Parshall, *Cooperstown, N. Y.:* After graduating I commenced practice at Springfield Center, in this county, and was doing a very successful practice, but having inflammatory rheumatism had to give it up; spent three years on a farm and then went into the drug business for a time. Tried practice again, but had to quit on account of another attack of rheumatism. Went into the drug business again for a short time, then into the undertaking business, which I have been in for the past twenty-five years. As the old saying is, a rolling stone gathers no moss, and I have not gathered much and feel that my life work has been pretty nearly a failure.

Dr. Francis J. Stevens, *Boxford, Mass.:* After graduating I commenced practice in Hampstead, N. H., where I remained four years and then moved to Haverhill, Mass., where I remained until 1878. The last year I lived at Haverhill I edited the Haverhill *Gazette*. Then, after spend-ing three years in New Hampshire, I moved to Boxford, Mass., where I have lived ever since. I have not put up a sign here or attempted to get into practice, but spend my time in looking after my farm. I have been married twice, my first wife died in 1873, the second is living. We have no children. In my practice I think I may say that I was fairly successful. In each place where I have lived I have been connected with the school boards, and I am now the chairman of the school committee at Boxford. A large portion of my time here I have been superintendent of the local Board of Health. I have been a member of the Fraternity of Odd Fellows since May, 1846, and a Free Mason since September, 1855; am a K. T. and a 32nd degree Mason, and am the oldest member and oldest past-master of the lodge to which I belong, and I suppose the oldest surviving charter member of the chapter and commandery in Haverhill.

HARRY S. PEARSE, *Historian, A. A., A. M. C.*

Dr. Herman Bendell, Historian of the Class of 1862, was present, and made a verbal report of his class. The following history was then submitted for publication:

HISTORY OF THE CLASS OF 1862

The regular historian of this class was unfortunately unable to report and the duty has fallen to me. Its exercise has been a great pleasure to me, as it has brought me in close relationship with some of the sturdiest stock of our Association and some of the most prominent men in the profession. A total of thirty were graduated; of this number two are known to have died, eleven have been lost track of, the addresses of seventeen are known, these were written to and eleven responded. A synopsis of their records is given below:

THEODORE Y. KINNE, *Paterson, N. J.:* After graduating in 1862 I went to the city of Syracuse, N. Y., and began the practice of medicine. In 1864 I entered the U. S. Army as Assistant Surgeon and served continuously until I was mustered out in April, 1866. I came to Paterson, N. J., the following June and have been in that city ever since. I have been engaged in general practice, have served on the local Board of Health as a member and for ten years as its president; have been presiding officer of the New Jersey State Homeopathic Medical Society, and for two years president of the American Institute of Homeopathy. I am now censor of the New York Homeopathic Medical College. Outside the profession, I have held social and religious offices that were in the gift of the society and denomination to which I belonged. So far as my work is concerned, probably it has been that of every other physician, and have had reason to be thankful for the success that has been accorded me. What the future may bring forth I know not; but, like William McClure, in the "Bonny Brier Bush," I am going on unto the end.

CHARLES M. FRISBIE, *Bainbridge, N. Y.:* After graduating in December, 1862, I received my commission as assistant surgeon in the 76th Regiment,

N. Y. S. Vol. Infantry. In April of the next year I received my commission as assistant surgeon of the 111th Regiment, N. Y. S. Vol. Infantry, and served with this regiment until the close of the war, receiving an honorable discharge from the Government Hospital at Washington, D. C., in October, 1865. From 1865 to 1872 I practiced at Bovina Center, Delaware County, N. Y. I then removed to Bainbridge, N. Y., my present place of abode. I bought the only drug store in the place and engaged in the drug business, giving up the practice of medicine, excepting consultations and office practice. A year ago I retired from all active work and have accumulated sufficient means for support in my old age.

W. A. BLISS, *Brooklyn, N. Y.:* Settled in Brooklyn in the spring of 1866 and was a very busy physician and hard worker until the spring of 1893, when I gave up practice and moved to Fishkill-on-Hudson. Returned to Brooklyn in 1899 and am living in old home.

J. NEWTON ARNOLD, *Clyde, N. Y.:* At the time of graduation, I was serving as assistant surgeon in the 7th N. Y. Artillery, and received my commission after graduation. Later I received the commission of surgeon and served continuously until the close of the war. Settled in Eldridge, N. Y., where I practiced until 1869, when I moved to Clyde, where I have practiced ever since. Pecuniarily I have not been successful, but I think I have held the regard of my brethren for I served nine years as secretary of the Central New York Medical Association. I have for several years been president or secretary of the Wayne County Medical Society, and am a member of the American Medical Association. Scientifically I have nothing to mention.

JOHN L. VAN ALSTYNE, *Binghamton, N. Y.:* Immediately after graduation, received an appointment as assistant surgeon of 3rd N. Y. Cavalry, was promoted to surgeon of said regiment and served until the close of the war as brigade surgeon, First Brigade, Kantz Division of Cavalry. Served from January to June, 1865, as surgeon-in-chief for second subdistrict of Eastern Virginia. In June was mustered out of service. After leaving the army I was associated with my brother, Dr. S. M. Van Alstyne, in practice in Richmondville, Schoharie County, N. Y., for seven years. After a year spent in New York colleges, I located in Binghamton, where I have since been engaged in active practice. Have held few minor positions, such as pension examiner and county physician. I send my cordial greetings to the old class of '62.

WALTER M. FLEMING, *Hotel Victoria, New York City:* After graduation in 1862 I began practice in the city of Rochester, N. Y., where I remained until 1869. Was there Health Officer for two years. In 1869 I located in the city of New York and have been here ever since. Have two sons, one of them a practicing physician in Mount Vernon, N. Y. In 1875 became a qualified examiner in insanity in the Supreme Court of the city of New York. Have been a member of the New York County Medical Society, Medico-legal Society and the Physicians' Mutual Aid. Consulting physician for years to St. Elizabeth's Hospital. Have written quite extensively on insanity and nervous diseases, drug habit, dipsomania, etc. Have been much interested in Masonry for over thirty years. Was made a 33rd degree Mason in 1872. I am still in active practice, but now rather a circumscribed one, insanity and nervous diseases.

J. N. RIPPEY, *Grand Rapids, Michigan:* Immediately after graduation I was commissioned in the army as assistant surgeon. I was promoted and served continuously until the end of the war. In October, 1865, I went to Omaha and opened an office, obtained the position of county physician. In 1869 I was ordained deacon in the Episcopal Church, and in 1871, to the priesthood. I have held parishes in Nebraska, in Southern Ohio and in Western Michigan. I am now acting as curate in St. Mark's Church, Grand Rapids, the largest parish in this part of the state. I should like very much to attend the reunion, but cannot well spare the time. My kindest regards to all the class.

LYNDHURST C. DODGE, *Rouses Point, N. Y.:* After graduating in 1862, served in '64 and '65 as assistant surgeon, U. S. A., on duty at Lincoln Hospital, Washington, D. C. Since that time have practiced my profession at Rouses Point, N. Y. Am a member of the Clinton County Medical Society and the Medical Society of Northern New York. Have been president of each of these societies. Am one of the charter members of the New York Medical Association. Have not been very well for the past year.

IVORY LOW, *Canaan, Maine:* Since my graduation in 1862 I have been in the town of Canaan most of the time. A few years were spent in Kansas and California, but not in the practice of medicine. I returned to Canaan and resumed my practice, and the probabilities are that I will spend the remainder of my life here.

A. M. YOUNG, *Salem, N. Y.:* After graduating, I took a post-graduate course at Bellevue Medical College, New York, then settled in East Greenwich, N. Y., where I practiced twelve years. In 1875 I moved to Salem, N. Y., where I have since been in constant practice.

ALBERT VANDER VEER, *Albany, N. Y.:* After graduating, entered the U. S. Army, being one of the original one hundred commissioned as U. S. medical cadets, and was assigned to duty at Columbia College Hospital, Washington, D. C. While there, attended a course of lectures at the National Medical College, and in 1862 received from this institution a degree of M. D. In 1863 was commissioned assistant surgeon of the 66th Regiment of New York Vols., and the following year was advanced to the grade of surgeon with the rank of major. Was mustered out of service in 1865. After attending a course of lectures at the College of Physicians and Surgeons, New York City in 1866, returned to Albany and began the practice of medicine. In 1869 assumed the chair of general and special anatomy in the Albany Medical College; was also attending surgeon to the Albany Hospital, and in 1874, was called to the same position in St. Peter's Hospital. In 1874 went abroad for the purpose of studying, and in 1876, on the reorganization of the Albany Medical College, accepted the chair of the principles and practice of surgery. In 1882 was appointed to the position of professor of surgery and clinical surgery in the Medical College. Have written extensively on surgical subjects and for some years devoted most of my time to abdominal surgery. Have been president of the New York State and Albany County Medical Societies, am a corresponding member of the Boston Gynecological Society, a member of the British Medical Association, fellow of the British Gynecological Society, member of the American Medical Association, the American Association of Obstetricians and Gynecologists and other medical and surgical societies. In 1895 was appointed Dean of the Albany Medical College, also a Regent of the University of the State of New York, and for many years has been a vice-president of the Holland Society. In 1869 received from the Albany Medical College the honorary degree of M. D., in 1882 the degree of A. M. from Williams College, and in 1883 that of Ph. D., from Hamilton College and Union University. In June, 1867, married Margaret E., daughter of the late Simeon Snow, M. D., of Currytown, N. Y.

HARRY S. PEARSE, *Historian A. A., A. M. C.*

HISTORY OF THE CLASS OF 1882.

Mr. President and Fellow Classmates:

Twenty years have passed since the class of '82 left the portals of the Albany Medical College, to do its share in alleviating the ills and sufferings of mankind. As historian I wrote to all the surviving members of the class whose addresses were known and received answers from a number of them, extracts from which I will read. The class graduated forty-nine members, seven of whom have gone to that undiscovered country from whose bourne no traveler returns. Six members died during the first decade and but one the second.

WILLIAM M. ARMSTRONG died of phthisis May 31, 1884, at Edinburgh, N. Y., aged 26 years.

JAMES S. DORNET died of phthisis, March 1, 1883, at Denver, Col.

HARRY M. BURTCH died February 12, 1896.

DANIEL C. HAZEN died in April, 1888, at Lowell, Ill.

FRED. HOLCOMB died of pneumonia March 28, 1891, at Kensington, Ill.

JOHN W. MANN died from a complication of diseases March 4, 1884, at Albany, N. Y.

JOSEPH W. RILEY died at West Troy, N. Y., Jan. 15, 1886, of typhus fever which he contracted while house physician at the Albany Penitentiary.

The following are extracts from the letters which I have received:

DR. FRANK V. BROWNELL is located at Canajoharie, N. Y., and writes that he expects to be in Albany on the 6th of May, but if unable, it will not be because he does not want to meet the boys (?) again.

WALLACE E. DEITZ is located at Berne, N. Y., and writes that he expects to be present May 6th. Says the past twenty years have brought him hard labor, long days and no nights, at least much of the time; says a country practice is hard work and many times a pittance for pay or no pay at all. Financially has no fault to find; does not believe money is our main object if true to our calling, the noble profession of medicine; finds a doctor's life filled with something to do all the time, and many times wonders how and where his classmates are. Hopes to see a goodly number present on the 6th.

George J. Holmes is located in New Britain, Conn., and writes that he expects to be with us on our twentieth anniversary and should be much disappointed if unable to come. The years have brought prosperity and happiness and he always remembers his Alma Mater with real pleasure.

Frank L. Harter is located at Syracuse, N. Y., and writes that he expects to be in Albany on the 6th.

George H. Houghton is located at Albany, N. Y., and writes that he sincerely hopes a goodly number of the class will be present on the 6th. Says he will have something to say on that occasion.

William Kamp is located at Belleville, Kansas, and writes: "Your invitation to be present and participate in the class reunion on May 6th has been received. I trust you will remember me to such of the class as may be present, as it will be impossible for me to meet you. The twenty years that have passed have gone by rapidly. They find me still in the land of the living with no cause to complain. A due proportion of prosperity and happiness has fallen to my lot. The years have brought to me a wider experience and I trust a greater ability to do good to my fellow creatures. They have also brought gray hairs and a realization that we, as a class, are approaching the meridian of life and that we should be doing the best work that is in us."

Adam Y. Myers is located at Buskirks, N. Y., and writes: "The last ten years have passed very quickly. I have been busy during much of this time. I am not able to add much to what I said ten years ago. My work has had many interesting features; have had a fair degree of prosperity, and if there is any happiness in riding over hill and muddy road and earning money you can't collect, I have had my share of that. I have managed to keep the wolf away from the door, and have brought up two boys, one of whom is in college now, and the other expects to be in two years."

James R. Newton is located at Scranton, Pa., and writes that he is sorry he cannot be with us on the sixth. "Still toiling in the place where I first settled. Regards to all."

Frank A. Palmer is located at Mechanicville, N. Y., and writes: "Am still at Mechanicville; located there in 1883. Shortly after graduating, opened an office on Hudson Avenue, Albany, which I soon abandoned to enter into partnership with Dr. Ferguson, of Glens Falls. I remained with Dr. Ferguson a few months and then went to Mechanicville, N. Y. I have two children, a daughter of 15 and a son, William Hailes Palmer, aged 20, who graduates at Cornell University in June. I am engaged in general practice, a large share of which is surgical. Am a member of several medical societies and president of the Saratoga County Medical Society. I am health officer for Mechanicville, and always vote the Republican ticket. I am always pleased to meet and hear from any of the graduates of the Albany Medical College."

Horace R. Powell is located at Poughkeepsie, N. Y., and writes: "I expect to be present on Alumni day and take part in the celebration of the twentieth anniversary of the graduation of our class. Soon after graduation I located at Housatonic, Mass., removing to Poughkeepsie, N. Y., in September of the same year. I am at present enjoying a good general practice. I have held several public positions, the most important of which was as member of the Board of Education for five years and for three years its president. In 1892 I was honored with the election as president of our Alumni Association, a statement of which fact I am always pleased to make. I am married and have a wife, a son of 18, now at college, and a daughter of 14, now attending our high school. I send a kindly greeting to all."

FREDERICK H. RAY is living at Helena, Mont., and writes: "I regret very much I cannot attend commencement exercises on the twentieth anniversary. As you see I am about 2,000 miles distant. Though not practicing, am much interested in my classmates and Alma Mater. Since last report life has been uneventful. At that time I was in the drug business. Continued until '99, but the confinement and long days impaired health. Am now an office holder, assistant state examiner. Our office has under it all the county and state officers handling money and also some twenty state banks and trust companies. It gives me an opportunity to travel and get outdoors, with consequent benefit physically. In addition am interested largely in some land enterprises. With all my duties have no time to keep in close touch with medical matters. However, I consider the time and money spent at A. M. C. has brought me ample returns."

SYDNEY F. ROGERS is located at Cohoes, N. Y., and writes: "The twenty years of practice has been of profit and in part a pleasure. I have a good and profitable business, family all grown, consisting of one boy and two girls. Have been located in Cohoes four years. I will make every effort to meet you and so many of our class as may be present."

WALTER W. SCOFIELD is located at Dalton, Mass., and writes: "I will be with you at commencement, May 6th, if possible. Hope to meet a large number of our class. If I do not succeed in getting away, tell the fellows I am still the same old Scofield, working away, contented in any field, and doing very well, so far as temporal things are concerned. I hope for a fine day, a large gathering and a good dinner. Success to all, and to the dear old college."

WILLIAM B. SABIN is located at Watervliet, N. Y. Is enjoying a good general practice; has a wife and one daughter, 10 years old, and has no complaints to make.

The following members of the class were not communicated with, as their addresses were unknown: RICHARD J. BROWN, CALVIN E. CARPENTER, MILTON PARSONS.

WILLARD R. HILLEGAS is located at Chicago, Ill., and writes that he is sorry to state that "it will be impossible to be with you on the 6th, and more especially as I would like to meet the 'Alumni Class' of 1882. The road which I have traveled since leaving college has been much the same as is open to most young men starting in the medical profession, who leaves college armed with only a diploma and handicapped by what he thinks he knows. Have been practicing medicine in Chicago for the past fifteen years, making a specialty of 'Abdominal Surgery' and have no reason to complain of results."

E. FRANK MARSH is located at Brooklyn, N. Y., and writes: "The passing years since the spring of 1882 have used me kindly, although the time has been filled with hard work. I settled in Fulton in April, 1882, and practiced there and in what was then Oswego Falls (on opposite side of Oswego River), continuously till the autumn of 1893. I was married before graduation to Elma T. Randall, of Fairdale, N. Y., and while residing in Oswego Falls, my two children were born, the eldest Mabel R., on May 5, 1883, and the youngest Edward H., on September 7, 1886. They are both living and enjoying good health. My daughter is about to graduate from the Teachers' Training School in Brooklyn, while my son is about to enter upon his senior year in Erasmus Hall High School. My wife is also living and in good health. During my residence in Oswego Falls, I served one year as president of the village and three years as coroner of Oswego County. I acquired a large practice in Fulton during the years 1887 to 1893, and owing to the severity of the winters, and the amount of long drives necessarily a part of a country physician's life, decided to come to Brooklyn, N. Y., where I have since resided, and during the years since 1893 have thoroughly established myself here. I would further say that while residing in Fulton I became a member of the N. Y. State Medical Association and president of the Oswego County Medical Society, and examiner for most of the large life insurance companies. I am still an honorary member of the Oswego County Medical Society, and a member of the Kings County Medical Society. My work during these years has been in general practice, and I have done but little literary work. Have contributed papers on the subject of Diphtheria and on "The Mortality among Irish-Americans from Tuberculosis." I am a past master of Minerva Lodge of Free and Accepted Masons and a member of the First Reformed Church of Brooklyn. Should like very much to be with you and all the others of the old class on Tuesday next, but fear I may not be able to get away. Please give my hearty greeting to all present."

No answers were received from the following members:

HIRAM C. ABRAMS, *Newtonville, N. Y.*
HENRY D. BLANCHARD, *Portlandville, N. Y.*
FRANK BURTON, *Minneapolis, Minn.*
CASSIUS P. BYINGTON, *Cairo, N. Y.*
EDWARD S. COYLE, *Ballston, N. Y.*
WILLIAM S. DE GOLIA, *Crossville, Tenn.*
BERNARD EAGAN, *Cohoes, N. Y.*
HENRY C. FINCH, *Broadalbin, N. Y.*
REYNALDO J. FITZGERALD, *Minneapolis, Minn.*
WILLIAM E. FOX, *North Hoosick, N. Y.*
WILLARD GILLETTE, *Roseboom, N. Y.*
LEVI C. HUBBARD, *Carthage, N. Y.*
GEORGE HUDSON, *Stillwater, N. Y.* Present to-day.
EDWARD F. JOHNSON, *Champion, N. Y.*
FRANK B. LOCKE, *Colebrook, N. H.*
GEORGE E. LYON, *St. Louis, Mo.*
EDGAR E. MARYOTT, *Springfield, Mass.* Present to-day.
WALTER B. MILLER, *Millerton, N. Y.*
WILLIAM J. PEDDIE, *Fultonville, N. Y.*
WILLIAM B. PLATNER, *Germantown, N. Y.* Present to-day.

Addison O. Roberts, *Bath, N. Y.*
Ernest L. Sampson, *Mexico, N. Y.*
Lemon Thompson, Jr., *Glens Falls, N. Y.*
Thomas C. Walsh, *Pulaski, N. Y.*
Isaac C. Washburn, *Chatham, N. Y.*
John B. Washburne, *Delmar, N. Y.* Present to-day.

The Class of 1882 extends a hearty welcome and best wishes to the Class of 1902.

William B. Sabin, *Historian*, '82.

Dr. MacFarlane then moved that the thanks of the Association be extended to Dr. Pearse, the Historian, and the Class Historians, for their services in preparing these histories, calling attention to the careful work which had been done, and in the systematic arrangement of the biographical and historical sketches, which, during the incumbency of Dr. Pearse, had become so valuable a part of the records of the Association. On amendment, that this motion be communicated by the Secretary to Dr. Pearse, the motion, as amended, was unanimously adopted.

The Recording Secretary stated that biographical notices of deceased members of the Association had been published in the Albany Medical Annals during the year, and requested members of the Association to forward biographical sketches of deceased alumni. He then read the following:

NECROLOGY

Dr. Meredith Clymer, Professor of Diseases of the Nervous System and of the Mind in the Albany Medical College, 1870-1873; at New York City, April 22, 1902, aet. 85.

Dr. Maurice Perkins (Hon.), at Schenectady, N. Y., June 18, 1901, aet. 65.

Dr. William H. Snyder ('39), at Troy, N. Y., November 19, 1901, aet. 87. Dr. Snyder was a member of the first class graduated from the Albany Medical College.

Dr. Tabor Burton Reynolds ('42), at Saratoga Springs, N. Y., July 3, 1901, aet. 79.

Dr. Conrad J. Crounse ('46), at Clarksville, N. Y., December 12, 1901, aet. 80.

Dr. Abijah Thurstin Hudson ('47), at Stockton, Cal., February 5, 1902, aet. 82.

Dr. Peter I. Stanley ('53), at Windham, N. Y., October 5, 1901, aet. 76.

Dr. Peter Faling ('54), at Gasport, N. Y., November 23, 1901, aet. 69.

Dr. Sumner C. Webb ('54), at Homer, N. Y., December 21, 1901, aet. 81.

Dr. Gilbert E. Palen ('55), at Ocean City, N. J., July 28, 1901, aet. 69.

Dr. Daniel Schuyler Young ('55), at Cincinnati, Ohio, February 20, 1902, aet. 74.

Dr. Nathaniel S. Cheeseman ('60), at Scotia, N. Y., September 12, 1901, aet. 67.

Dr. Henry Tyler Phillips ('60), at Cheshire, Mass., May 24, 1901, aet. 67.

Dr. Asabel Burt ('61), at Wakefield, Kansas, April 5, 1901, aet. 72.

Dr. John E. Comfort ('64), at New York City, May 29, 1901, aet. 63.

Dr. James Patterson Kimball ('64), Assistant Surgeon General, United States Army (retired), at Tannersville, N. Y., April 19, 1902, aet. 62.

Dr. Isaac T. Monroe ('66), at Granville, N. Y., December 30, 1901, aet. 60.

Dr. S. Townsend Bowne, ('72), at Leadville, Col., March 26, 1902, aet. —.

Dr. Alonzo P. Casler ('80), at St. Johnsville, N. Y., May 11, 1901, aet. 56.

Dr. Theodore W. Nellis ('81), at Albany, N. Y., April 14, 1902, aet. 51.

Dr. Fred J. Tompkins ('85), at Troy, N. Y., August 12, 1901, aet. 37.

Dr. Francis T. McIntosh ('86), at Troy, N. Y., May 5, 1901, aet. 43.

Dr. George Hamilton McMurray ('87), at Glens Falls, N. Y., July 13, 1901, aet. 34.

Dr. Andrew Jackson Rogan ('94), at Crestone, Col., August 9, 1901, aet. —.

Dr. Harry Alvin Merchant ('97), at Monson, Mass., June 25, 1901, aet. 34. Dr. Merchant was one of the martyrs of the profession, having contracted fatal pyæmia from a patient upon whom he was operating.

Dr. Richard Van Beusekom, Jr. ('97), at Albany, N. Y., May 28, 1901, aet. 31.

Dr. Louis D. Masson (1900), at Cohoes, N. Y., January 10, 1902, aet. —.

The committee appointed to nominate officers presented the following report, which was read by its Chairman, Dr. Joseph D. Craig:

For President,

WALTER W. SCOFIELD, ('82), Dalton, Mass.

For Vice-Presidents,

ALVA E. ABRAMS, ('81), Hartford, Conn.
WARREN C. SPALDING, ('81), New York City.
WILLIAM B. SABIN, ('82), Watervliet, N. Y.
THOMAS H. FLYNN, ('90), Somerville, N. J.
CHARLES R. SEYMOUR, ('92), Binghamton, N. Y.

For Recording Secretary,

J. MONTGOMERY MOSHER, ('89), Albany, N. Y.

For Corresponding Secretary,

ANDREW MACFARLANE, ('87), Albany, N. Y.

For Treasurer,

Robert Babcock, ('84), Albany, N. Y.

For Historian,

Eugene E. Hinman, ('99), Albany, N. Y.

For Members of the Executive Committee (term three years),

James F. Barker, ('77), Albany, N. Y.
Thomas Wilson, ('74), Hudson, N. Y.
Edgar A. Vander Veer, ('98), Albany, N. Y.
George E. Lochner, ('88), Albany, N. Y.

On motion of Dr. Herman Bendell, the report was accepted and adopted, and the Recording Secretary was instructed to cast a ballot in behalf of the Association for the gentlemen named therein. The ballot was cast, and those named in the report were declared by the President duly elected officers of the Association for their respective terms.

Dr. Scofield, President elect, was called by President Schuyler to a seat at his side, was introduced to the Association, and thanked the members present for the honor conferred, which he regarded as an honor to his class of 1882, as well as to himself. He assured the Association of his desire to make every effort to promote its welfare.

Dr. Charles A. Ingraham, of the Class of 1878, then read a poem. On motion of Dr. Tucker, the thanks of the Association were accorded Dr. Ingraham, and the manuscript of the poem was requested for publication in the Proceedings of the Association.

POEM

By C. A. Ingraham, M. D., *Center Cambridge, N. Y.,*
Class of 1878.

How fair appear his native hills,
When from an alien shore
The wanderer returns. And thrills
His bosom, and the tear distills,
When seen the homestead's door.

How gladly hears that kindly voice—
His mother's voice! What bliss
At the dear hearthstone to rejoice,
To be her heart's instinctive choice,
To feel her loving kiss!

'Tis thus, old halls, we come to thee,
  And O, our bosoms burn
As thy familiar walls we see,
And 'midst thy fond fraternity
  A little while sojourn.

And there are sons of thine who dwell
  In many parts afar,
Whose hearts this hour with longing swell
To leave the tincture and scalpel,
  And haste where brethren are.

Beside the couch of fevered pain
  Their minds persist to roam;
They dream of year when young and vain
They came to Æsculapius' fane
  To delve the learned tome.

And on their rides o'er street and lane
  They see bland Armsby's face,
And Mosher, kindly and urbane,
And Swinburne, practical and plain,
  Hear Vanderpoel's deep base.

But shall the gloomy cave of death
  These men of learning hold?
No! each has here attending wraith;
They linger hanging on the breath
  Of friends of days of old.

And here imagination sees
  The great of ancient time.
Our day invites Hippocrates,
Who scaled the ramparts of disease
  And made his art sublime.

And Celsus, too, of varied gifts,
  No doubt has here his ghost,
And, universal critic, sifts
Our words and with keen judgment lifts,
  And listens all engrossed.

If one our soaring eloquence
  Should threaten to convulse,
Lo! Galen's shade with diligence
Observes emotion's violence,
  His finger on the pulse.

Speak Paracelsus, are you here,
  Yet wandering under ban?
Then stay incredulous and sneer,
But let some truth of thine appear,
  Prophetic charlatan.

Here Harvey comes, great theorist,
  To meet this brotherhood.
Hail, glorious anatomist,
Forever shall thy name exist
  While courses human blood!

And Jenner waits, that kindly sage,
  Who sought not preference;
Who blessed his unbelieving age,
And tamed the fierce and roving rage
  Of ghastly pestilence.

Still one of native soil I call;
  We need not sound his fame,
For weeping Gratitude shall fall
Forever on the marble wall
  Inscribed with Morton's name.

How great a heritage is ours,
  O men of medicine!
A wealth of intellectual powers;
And fields of Charity's sweet flowers
  Adorn Disease's fen.

These be the doctor's growing stock:
  A mind of cultured grain;
A heart as sturdy as the rock,
As meek as meekest of the flock,
  That roams the grassy plain.

This be the doctor's greatest fee,
  More precious far than gold:
Beneath his skill to ever see
Health robbing misery with the key
  Formed in Love's beauteous mold.

Say, you who watch the anguished bed
  Of ushering in of breath;
Who hear last words of parting said,
And close the eyelids of the dead
  'Neath shadowing wings of Death;

Say, is there aught on Fame's high cliff
  Can rival rapturous hour,
When you have after fearful strife
And sleepless nights snatched back a life
  From Dissolution's power?

Call forth the conquerors of old,
  E'en Alexander's sprite,
And yet no transports shall be told
Of triumphs great and manifold
  Like yours when won the fight.

And as, young men, on rugged way
  Physicians free you go,
The letter of your art obey
But, too, the spirit of that day
  On the road to Jericho.

And learn a kindly presence sheds
  An ever healing ray
Upon Prostration's burning beds,
And through the cast down spirit spreads
  The light of Hope's display.

Dr. Charles E. Davis offered the following resolution, which was unanimously adopted, and a copy ordered to be forwarded to Dr. Van Allen:

WHEREAS, It is with deepest regret that we learn of the serious illness of Dr. T. F. C. Van Allen;

Be it resolved, That the Alumni Association of the Albany Medical College, in annual meeting assembled, unanimously express to him and his family our deepest sympathy, and acknowledge our great appreciation of his ability as a consulting physician and his invaluable services as an officer and member of this Association;

Be it further resolved, That a copy of this resolution be directly transmitted to Dr. Van Allen and that it be spread upon the minutes of this meeting.

Dr. A. Vander Veer, for the Committee on Award for the Schuyler Alumni Prize, presented the following report:

ALBANY, May 6, 1902.

To the Alumni Association of the Albany Medical College:

Gentlemen: Your committee appointed to award this year the prize of one hundred dollars offered by Dr. Clarkson C. Schuyler would respectfully report as follows:

The subject for essays was "What are the facts and arguments for and against the infectious nature of malignant new growths?"

Five essays were submitted in competition and after mature deliberation your committee have unanimously agreed that the prize of one hundred dollars was fairly won by the writer who signed himself "Krebsen."

The essay signed "A Doctor" was so good that your committee deem it worthy of honorable mention.

Respectfully submitted,

SAMUEL B. WARD,
HENRY HUN,
A. VANDER VEER.

Dr. Vander Veer then opened the envelope entitled "Krebsen," which enclosed the name of Dr. H. Judson Lipes. The envelope entitled "A Doctor" contained the name of Dr. C. Harper Richardson.

On motion of Dr. Tucker, which was carried, the successful prize essay was placed in the hands of the Executive Committee, and the Committee of Award was continued.

The Recording Secretary read the following notice:

There will be a meeting of the Alumni Association of the Albany Hospital Internes at 7:45 this evening in the waiting room of Hotel Ten Eyck. All ex-internes invited to be present.

C. B. HERRICK, *President.*

The Recording Secretary announced the order of exercises for the afternoon and evening, and, no other business appearing, the meeting, on motion of Dr. Tucker, adjourned.

COMMENCEMENT EXERCISES

The seventy-first commencement exercises of the Albany Medical College were held at Odd Fellows' Hall, on Tuesday afternoon, May 6, 1902, at three o'clock, in the presence of a large audience. Rev. Dr. A. V. V. Raymond, President of Union University, presided, and upon the stage were seated the members of the Faculty, officers of the Alumni Association and prominent citizens.

The following was the

Order of Exercises

Overture—"The New Yorkers" . . . . *Englander*
Prayer—Rev. Archibald L. Love, D. D.

Music—Selection: "Maid Marian" . . . . *DeKoven*
Essay—La Salle Archambault

Music—Caprice: "Fanchonette" . . . . *Whitney*

CONFERRING DEGREES

By Andrew Van Vranken Raymond, D. D., LL. D.
Chancellor of Union University

Music—Intermezzo: "Scent of the Rose" . . . . *Loraine*
Address to the Graduating Class—Hon. Nathan L. Miller

Music—'Cello Solo: "Romance and Rondo" . . . . *Grueenwald*
Mr. Arnold R. Janser
Valedictory—Frank Malcolm Sulzman

Music—Valse: "Loin du Pays" . . . . *Berger*

REPORT ON PRIZES AND APPOINTMENTS

Dr. S. B. Ward

Music—March: "The Toreador" . . . . *Van Baar*

The Graduating Class was as follows:

La Salle Archambault	Cohoes, N. Y.
Thomas Carney	Schenectady, N. Y.
Elwin Champlin	Griffin Corners, N. Y.
Kent Stanley Clark	Oneonta, N. Y.
John Bowman Congdon	Albany, N. Y.
Hugh Michael Cox	Port Jervis, N. Y.
Edward Arthur Dawson	Brooklyn, N. Y.
August John Freutel	New York, N. Y.
John Henry Gutmann, B. S.	Albany, N. Y.
Stillman Smith Ham, Ph. B.	Schenectady, N. Y.
Earl Holcomb Jackson	Jordan, N. Y.
Robert Johnstone Kahn	Philadelphia, Pa.
Frederick Hubert Ladd	Sacket Harbor, N. Y.
Fred E. Lettice	Albany, N. Y.
Moses Joseph Mandelbaum	Albany, N. Y.
Joseph Mark, Ph. B.	Amsterdam, N. Y.
Edwin Alonzo Mason	Berlin, N. Y.
Henry Erle Mereness, Jr.	Albany, N. Y.
Willis Edgar Merriman, Jr., Ph. B.	Albany, N. Y.
Frederick Cornwall Reed	Cambridge, N. Y.
Frank Malcolm Sulzman	Waterford, N. Y.
Clifford Walter Sumner	Pownal, Vt.
Junius Parker Talmadge	Westfield, Mass.

Elbert Goodman Van Orsdell	Hudson, N. Y.
Charles P. Wagner	Fort Plain, N. Y.
George Van Voris Warner	New York City

Dr. Ward presented the prizes. He read a report on the Vander Poel prize, endowed by Mrs. Gertrude W. Vander Poel, in memory of her husband, the late S. Oakley Vander Poel, M. D., for many years a professor in the college, stating that this prize, consisting of a clinical microscope and accessories, offered to the senior student passing the best bedside examination in general medicine, had been awarded to Dr. Fred E. Lettice, and that at the competitive examination for house physicians and surgeons at the Albany Hospital the following appointments had been made: Drs. Willis E. Merriman, Jr., John H. Gutmann and Moses J. Mandelbaum.

The prize offered by Drs. Vander Veer and Macdonald for the best report of the surgical clinics was awarded to Dr. Frank M. Sulzman. For the second best report of these clinics, the prize offered by Drs. Hailes and Morrow was awarded to Dr. Moses J. Mandelbaum.

The prizes consisting of ophthalmoscopes, offered by Dr. Merrill for the best report of the eye and ear clinics, were awarded to Drs. Moses J. Mandelbaum and Frank M. Sulzman.

The Townsend Physiological prize endowed by the late Professor Franklin Townsend, Jr., M. D., was awarded to Mr. C. C. Sweet, for passing the best examination in physiology at the end of the first year of study.

Dr. Boyd's prize to the student passing the best final examination in obstetrics was awarded to Dr. LaSalle Archambault.

The prize consisting of a case of surgical instruments, offered to the senior student passing the best final examination, by the late Dr. T. W. Nellis, was awarded to Dr. LaSalle Archambault.

The prize offered by Dr. H. R. Powell to the second-year student passing the best final examination, consisting of a general operating case, was awarded to Mr. J. Howard Branan.

A prize consisting of Gross' complete pocket case of instruments, offered by A. B. Huested & Co. to the first-year student passing the best final examination, was awarded to Mr. Charles C. Sweet.

Dr. Bigelow's prize for the best dry preparation of the nose and nasopharynx was awarded to Dr. Frank M. Sulzman.

Dr. Blumer's prize, consisting of a microscope and accessories, to the second-year student presenting the best record for laboratory work in pathological anatomy, was awarded to Mr. Charles T. Cobb.

The Daggett prizes, consisting of eighty and forty dollars, respectively, for the best "anatomical specimens," were both awarded to Dr. Frank M. Sulzman.

The Daggett prize for the best "deportment irrespective of scholarship," consisting of eighty dollars, was awarded to Dr. Willis E. Merriman, Jr., and the second prize, consisting of forty dollars, was awarded to Dr. Junius P. Talmadge.

Dr. Macdonald's prize for the best report of his surgical conference was awarded to Dr. Earl H. Jackson; honorable mention, Drs. John H. Gutmann and Moses J. Mandelbaum.

Dr. Stillman's prizes to the students attending the lectures on the history of medicine were awarded to Messrs. Virgil D. Selleck, Thomas S. A. O'Connor, Sylvester C. Clemens, H. M. Chandler, J. H. Branan, James N. Vander Veer and Russell Clute.

The Alumni Dinner

The twenty-ninth annual dinner of the Alumni Association was held at the "Ten Eyck," on Tuesday evening, May, 6, 1902, at half past eight o'clock. About one hundred were present, including members of the Association, the guests and members of the Graduating Class.

After the tables had been cleared and cigars passed, the following toasts were responded to, Dr. Joseph D. Craig acting as toastmaster:

1. "The Family Physician," Hon. Richard E. Connell.
2. "The Physician in Public Life," Dr. C. E. Nichols.
3. "The Faculty of the Albany Medical College," Dr. Henry Hun.
4. "The Dean of the Faculty," Dr. Albert Vander Veer.
5. "The Ex-Presidents of the Association," Dr. Clarkson C. Schuyler.
6. "The Association," Dr. Walter W. Scofield.
7. "Albany," William B. Jones, Esq.
8. "The Clergy," Rev. A. C. Lucas.

The toastmaster then declared the reunion of 1902 at an end.

Editorial

> Your engagement in this profession binds you, not only by consideration of your own interest, but by the weightiest responsibility to God and man, to do your duty in it with all your might. Keep this constantly in view: daily remind yourselves that you propose to take in hand the lives and welfares of your fellow-men; daily think quietly of what all this involves: and then you will daily decide that not even your own lives must be much dearer to you than the duties of your profession. * * *
>
> Why is it that nearly all of us are so much less anxious to be wise than to seem clever? Surely good education should teach us that nothing good was ever easy. * * *
>
> The burden of my address is work, lifelong work. And so it is and so it must be; there is no success without it, no happiness without it. A kind of success there is without it—the getting of money without honor—and to that there are many ways: but we do not teach them here.
>
> SIR JAMES PAGET.
>
> ***Introductory Address* at the Opening of the Winter Session at St. Bartholomew's Hospital, October 1st, 1863.**

A Post-Prandial Prophecy.

Among the after-dinner speeches at the last Alumni Banquet, most of which were timely and thoughtful, and some of which were witty and wise, the speech of Dr. Henry Hun, as representative of the Faculty, was of particular interest as presenting in a clear and forceful manner the possibilities of the Albany Medical College as a teaching institution. As Dr. Hun pointed out, medical institutions could have, under the fullest development, three functions, the teaching of the groundwork of medical theory and practice to undergraduate students, the more advanced instruction of post-graduates, and the prosecution of original research. As the speaker very properly said, the two latter functions can only be carried out extensively in largely-endowed institutions with large numbers of instructors Research work requires a great deal of time, special aptitude, and very frequently expensive apparatus. As a special department, it cannot, as a rule, be assumed by a small, unendowed institution, although, as an incident of effective teaching, some research work is desirable. Post-graduate work likewise entails time and a large teaching staff. Its possibilities in a small school are limited. There is no reason, however, why the hospital wards and laboratories should not be thrown open to the older graduates, at reasonable times, in order that they may become conversant with the newer methods. In undergraduate work, however, there is no reason why the small

JAMES PATTERSON KIMBALL, M. D.,

COLONEL, U. S. A.

Photographed by
Hollinger, New York

school should not be eminently successful. While the large schools, in the great cities, will necessarily capture the majority of brilliant investigators and clinicians, the fact will always remain that men of more modest attainments are often excellent teachers. Further than this the students of a small school always have the advantage of more direct personal contact with their teachers, than is usual in large institutions.

It seems to us that Dr. Hun's views of the limitations of our Alma Mater is an essentially just and proper one, and that the fact that we have limitations, should cause us to determine to make the most of our opportunities, and lead us to hope that a share of the great endowments which are constantly enriching medical schools will fall to the lot of the Albany Medical College.

In Memoriam

Colonel James P. Kimball, M. D.

[The following biographical sketch has been kindly outlined for the Annals by Dr. Warren C. Spalding, who was thrown into close relationship with Dr. Kimball through their common interest in the New York Alumni Association of the Albany Medical College. Dr. Kimball's service in the United States Army, from which the essential facts have been abstracted was furnished by his associate, Col. John Van Rensselaer Hoff, M. D., from the official records of the Surgeon-General's office. Mrs. Kimball has also kindly assisted in the work of preparing the sketch.]

The subject of this sketch, Colonel James P. Kimball, M. D., Assistant Surgeon-General of the United States Army, was born at Newark Valley, Tioga County, N. Y., August 21, 1839. His parents were John Kimball and Ruth Ellis Kimball, of Puritan ancestry. John Kimball was a direct descendant of Richard Kimball, one of the brothers who were among the early Plymouth colonists. The Ellises were also a strong Puritan family of Welsh descent. Major Pedig Ellis, grandfather of James P. Kimball, was prominent in the War of 1812, and had much to do in cultivating the military spirit of his grandson.

Dr. Kimball's early education was obtained at home and later at Ithaca, N. Y., when he prepared for college (Hamilton College, Class of '64); after which he entered the Albany Medical College, graduating in 1864. After some hospital practice he entered the Volunteer Medical Service of the United States Army, being appointed assistant surgeon of the 121st New York State Infantry, January, 1865. He was honorably mustered out in July of the same year. In 1867, he again joined the medical service of the regular army and was made assistant surgeon with the rank of first lieutenant.

His first battle was at Hatcher's Run, Virginia, an anniversary always earnestly recalled. As a cadet he was under fire, his duty being to bring in the wounded as they fell on the field. He was soon promoted to service in the large Division Hospital on David's Island, where the wounded were brought in boat-loads from the South. He was present before Petersburgh when Lee surrendered. His first order as a surgeon in the regular army directed him to report to Brigadier-General J. M. Cuyler. General Cuyler became devotedly attached to his young assistant, and Colonel Kimball's son Cuyler was named for the general.

He was in service at Fort Buford, Dakota Territory, August 3, 1867-'70. Here were long winters and no mails, and, surrounded by hostile Sioux, the little garrison, shut up inside the stockade, was frequently raided. At this time Dr. Kimball wrote a treatise upon Indian arrow wounds, but when it was ready for publication, the Indians had become armed with U. S. rifles. He studied the Sioux language and his knowledge of the six hundred words of their vocabulary was most useful to him afterwards. In October, 1879, he left Fort Sanders, Wyoming Territory, under General Merritt, for relief of Major Thornburg. (Ute War). There was a forced march of twenty hours and he had entire care of the wounded afterwards—forty men who had been lying uncared for for three days, the surgeon himself among the injured.

From 1884 to 1887 he was stationed at West Point, and from 1887 to 1896 he was on duty at various posts in the West, with exception of seven months in 1892, absent on leave, when he visited Europe. He had two terms of service at Governor's Island in New York Harbor, in 1877 and 1878, under General Hancock, and again from 1896 to 1900, during the Spanish-American War, in the command of General Merritt. He was promoted to be major and surgeon, January 24, 1886; lieutenant colonel and deputy surgeon-general, February 1, 1900; and colonel and assistant surgeon-general, January 1, 1902.

In September, 1899, while acting chief surgeon, Department of the East, headquarters, Governor's Island, Dr. Kimball began to feel the effects of the arduous and exciting life of duty and danger that he had experienced for nearly thirty-five years and he was granted a short leave of absence. A few months after his return he was sick in quarters, as a result of la grippe and overwork; and soon after, at his request, he was transferred to Omaha, Neb., as chief surgeon, Department of Missouri, hoping the dry inland climate might benefit the laryngitis from which he suffered. He only obtained partial relief, however, and was able to do very little work after this, being on sick leave from August, 1901, to April 7, 1902, at which time he was promoted colonel and assistant surgeon general, and placed upon the retired list. This only gives a desultory description of his official life. To know Colonel Kimball was to love him; and no one who was brought in contact with him failed to appreciate his worth through his devotion to duty and friendship. The writer once heard an officer of the army describe how Colonel Kimball bandaged his broken limbs, placed him upon an improvised stretcher, while fighting the Indians, and dragged him by horse many miles through dangers on this rough sled to a place of safety. Yet this was only a small incident of affection and duty in the life of this gentle, chivalrous and skillful physician who was ever ready to undergo toil and danger for those who were placed under his care or friendship.

During the Spanish-American War, while stationed at Governor's Island, as the disabled troops returned, the hospital was doubled in size, a new additional hospital was built and all the remaining available space was filled with tents besides; and yet, despite the arduous toil connected with this enormous service, this frail, loving, tender man, no longer young, in addition to his regular duties took up the burden of love so natural to him that he spent hours at night writing letters for these sick boys to their loved ones and answering letters from distressed parents. All this hardship and devotion to duty told severely upon him, and whether as a result of exposure and fatigue, or as an infection following the grippe, his health failed, and like the hero that he was, he silently, uncomplainingly and peacefully sought the calmness of Buford Lodge—his home in the Catskills, at Tannersville—and as the grand panorama of plain and mountain, desert and garden in which his life had been spent, faded from his earthly view the greater panorama of a noble, pure and self-sacrificing life was opened to his spiritual vision; and, on April 24, 1902, he entered peacefully upon his long final leave of absence.

Dr. Kimball married in 1869, Sarah Eddy, of Albany, N. Y. Their son, James Cuyler Kimball, was born at Governor's Island, in 1878, and is now at Yale College. Mrs. Kimball died at Fort Elliott, Texas, March 2, 1890. Dr. Kimball married in 1892, Maria Porter Brace. Their son, Philip Brace Kimball, was born at Governor's Island in 1898.

Dr. Kimball's contributions have been mainly in the line of official reports, some of which have been from time to time recorded in the ANNALS. At the outbreak of the Spanish-American War, he published in the ANNALS an illustrated article on the "Transportation of the Wounded in War," in which was given a description of a litter and ambulance service. The artist, Frederick Remington, was associated with Dr. Kimball in this, and the contribution was timely and attracted attention.

In 1899, Dr. Kimball was elected president of the Albany Medical College Alumni Association of the City of New York, an organization of 200 fellow graduates residing in this vicinity and whose interests he helped greatly to advance. Ill health, however, prevented his attendance and his fine address was read by another. The real worth of the man was splendidly described at that time by many of the speakers present who had known him for years. As a military surgeon and sanitarian Dr. Kimball stood very high, not as a brilliant man, fond of innovation and display, but as one imbued with the highest sense of duty. His reports to the department all show care and a low mortality rate and to this he lent every effort. His personality was quiet and yet magnetic, his manner dignified but always approachable, his voice was low, sweet and musical, and as we recall the silvery tones of our departed friend "How we revere them when they are no more."

D'ESTAING DICKERSON, M. D.

Dr. D'Estaing Dickerson, a graduate of the Albany Medical College, in the Class of 1857, died at his home in Kansas City, Mo., May 3, 1902, after a short acute illness. Dr. Dickerson was born at Rice's Corners, Watertown, N. Y., May 19, 1834. After his graduation he practiced at his home four years, and was then chosen surgeon to Sing Sing prison, which position he held when the Civil War began. He was commissioned by Governor Morgan assistant surgeon of the 33rd New York regiment, and in the summer of 1862 was promoted to be surgeon, serving with his regiment until its return home.

While in charge of the Liberty Hall Hospital, on the Peninsula, containing nearly 500 men, he was made prisoner, on the second morning of that terrible seven days' battle in front of Richmond. Liberty Hall was on the extreme right wing of the Army of the Potomac, and was once the property of Patrick Henry. Dr. Dickerson's tent was directly over the spot where that great and noted orator and statesman was born. During the winter of 1863 he was placed in charge of General Howe's Division Hospital, at Aquia Creek, and when General Hooker's series of battles occurred, was given the entire supervision of all the hospitals of the 6th Army Corps. The 33rd New York having been mustered out (its term of service having expired), he re-enlisted in the 1st New York Veteran Cavalry, and was, by Governor Seymour, commissioned its surgeon. It will be remembered that the late Professor Quackenbush was then the Surgeon-General of the State on the Governor's staff.

In the fall of 1865 Dr. Dickerson located at Kansas City, Mo. He has never held any very important office, but was appointed by three successive Democratic administrations city physician and was unanimously nominated by a Democratic convention for the position of mayor, but was not elected. He held the chair of professor of materia medica and therapeutics in the Kansas City Medical College, and was a member of the Grand Army of the Republic, and of the Military Order of the Loyal Legion of the United States. In 1899, with his wife, he visited Europe, and the hospitals of Glasgow, London and Paris In 1863 Dr. Dickerson married Miss Mary R. Sherrill, of Geneva, New York, daughter of the late Colonel Sherrill, who fell mortally wounded at the battle of Gettysburg, and of this union was born one child, which died in infancy.

Dr Dickerson wrote for his class reunion in 1897 a most appreciative letter, from which the above autobiographical facts are taken.

He said: "What little success I have made in life I attribute, in a great measure, to the early medical training which I received at the Albany Medical College. I therefore prize highly my *alma mater,* and as a further evidence of my love and esteem for this Alumni Association, I hereby enclose my check for fifty dollars, as a contribution towards defraying the expense of the banquet which, I presume, will follow this meeting, and I will ask Dr. Davis, historian, to drink for me the following toast: May the faculty and officers of the Albany Medical College and this Alumni Association *live long and be happy. May we all meet in Heaven."*

Dr. Dickerson's estate is valued at between $700,000 and $1,000,000. His will was made during his last illness, a few hours before his death, and includes a bequest to the College of six lots in Kansas City which are estimated to be valued at about twenty thousand dollars. This was in addition to other gifts in behalf of the College, made from time to time during the last few years. Of Dr. Dickerson's personal characteristics it is impossible now to write. His splendid war record, his success in the acquisition of wealth, his unwavering affection for his college, to which he attributes his success, all speak for high personal worth; and his legacy for the improvement of his alma mater and the benefit of medical education places him at once among the greater of our alumni.

J. Newton Arnold, M. D.

Dr Arnold's death occurred at his home in Clyde, N. Y., on May 17, 1902. The announcement is given in the Rochester *Democrat and Chronicle,* which contains the following short sketch of his life:

Dr. Arnold was one of the best-known physicians and surgeons of Wayne county. He was a graduate of the Albany Medical College, in the class of '62. The year before he enlisted in the Third New York Infantry, and served a short time. In 1862, after his graduation, he was appointed assistant surgeon of the Seventh New York Heavy Artillery, and was later commissioned a surgeon, serving until the end of the war He went to Clyde in the spring of 1869, and formed a partnership with Dr. Jarvis E. Smith, whose death occurred a few weeks ago. Dr. Arnold was, at the time of his death, secretary of the Wayne County Medical Society, a position which he held for several years, and was also a member of the New York State and American Medical Associations. He acted as surgeon of the Wayne County Soldiers' and Sailors' Association He was a prominent member of Clyde Lodge, No. 341, F. and A. M., and secretary of Griswold Chapter, No. 201, R. A. M. During his residence of many years in Clyde he held various offices in Snedaker Post, No. 173, G. A.

R., being several times commandant. He was sixty-five years of age.

Dr. Arnold's brief autobiographical note is also given in the Class History of 1862 in this issue, his apparently sudden death bringing a sense of shock to all who have so recently heard the modest statement of his life work.

Edgar W. Morehouse, M. D.

Dr. Edgar W. Morehouse, of the Class of 1884 of the Albany Medical College, died at his home in Peru, Columbia County, N. Y., May 13, 1902. After graduation Dr. Morehouse began practice at Peru. In July, 1890, he married and went abroad, traveling on the Continent, where he attended the Medical Congress at Berlin, and visited the hospitals of Vienna, Paris, Rome and London. On his return he made his home in Troy, N. Y., where he practiced, but later returned again to Peru, N. Y.

S. Townsend Bowne, M. D.

Dr. S. Townsend Bowne, who graduated from the Albany Medical College with the class of 1872, died at Leadville, Colorado, March 26, 1902. Dr. Bowne was for many years the leading physician in Leadville, but suffered from a chronic disease which finally incapacitated him and terminated his life.

Public Health

Edited by Joseph D. Craig, M. D.

Department of Health—City of Albany, N. Y.

Abstract of Vital Statistics, April, 1902

Deaths

	1902	1901		1902	1901
Consumption	20	23	Accidents and violence	11	7
Typhoid fever	1	2	Seventy years and over	26	21
Scarlet fever	0	1	One year and under	14	17
Smallpox	3	0	Albany City Hospital	16	12
La Grippe	0	3	St. Peter's Hospital	2	3
Diphtheria	0	5	Albany Orphan Asylum	1	0
Measles	0	1	Child's Hospital	1	0
Other Contagious Diseases	2	2	County House	4	1
Pneumonia	8	12	Home for Aged Men	1	0
Broncho-Pneumonia	4	2	St. Margarets Home	1	0
Apoplexy	6	14	Home for Friendless	2	1
Bright's disease	17	11	Smallpox Hospital	3	0
Cancer	1	5			

Total number of deaths for April, 1902, 136; for April, 1901, 156.

Death rate this year for April, 14.89; last year for April, 17.08; death rate less non-residents, 14.79.

WORK OF HEALTH PHYSICIANS

Total number of new assignments made during the month of April...	82
Total number of calls made..	359

BENDER LABORATORY REPORT ON DIPHTHERIA TESTS

Initial positive	Initial negative	Release positive	Release negative
21	78	13	8

Total number of cultures...........120

INSPECTIONS

During the month there were 149 sanitary inspections and 145 re-inspections. Eleven complaints were without cause; seventy-five nuisances were abated; twenty-five cases were referred to Commissioner of Public Safety and eighty-eight notices were served.

One hundred and sixty-one markets were inspected and 330 pounds of veal was condemned and destroyed; 6 fish vendors' wagons were inspected; 4 slaughter houses, 3 cow stables, 4 milk rooms, 29 milk peddlers, 3 water peddlers, 5 fish markets and 7 commission houses.

Among the plumbing inspections there were 438 on buildings, of which 274 were old buildings and 164 were new buildings. There were 76 iron drains laid, 59 street connections made, 75 tile drains laid, 33 cesspools, 66 wash basins, 85 sinks and a large number of miscellaneous inspection. 217 permits were issued, of which 177 were for plumbing and 40 for building. 39 plans were inspected, 14 for old buildings and 25 for new buildings. There was one violation of the plumbing laws.

CONTAGIOUS DISEASES REPORTED

	1902	1901		1902	1901
Typhoid fever............	9	3	Chicken pox..............	9	7
Scarlet Fever............	2	15	Measles..................	27	60
Diphtheria...............	29	74	Whooping cough..........	1	2

Number of houses fumigated..31 Number of rooms fumigated..68

Number of days quarantined for diphtheria:

Longest......36 Shortest......7 Average......18

Number of days quarantined for scarlet fever:

Longest......80 Shortest......18 Average......36

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY

The annual meeting of the Society was held in Alumni Hall, on Tuesday evening, May 13, 1902. The meeting was called to order at nine o'clock by the President. The following members were present: Drs. Ball, Boyd, Carroll, Case, Conley, Cook, Curtis, Dawes, Elting, W. H. George, Happel, Jenkins, Lochner, Lomax, Macdonald, MacFarlane, Mereness, C. H. Moore, Morrow, Mosher, Murray, Myers, Neuman, Papen, Rooney, Sautter, Shaw, Traver, A. Vander Veer, E. A. Vander Veer, Wiltse.

1. *Reading of the minutes of the last regular meeting.* The minutes as printed in the May number of the ALBANY MEDICAL ANNALS were adopted.

2. *Reading of the minutes of special meetings.* The minutes of the Memorial Meeting held on April 15th, to take action on the death of Dr. THEODORE W. NELLIS were adopted as printed in the ANNALS.

3. *Reading of the reports of officers and committees.* The treasurer's report was read by the treasurer, Dr. W. H. GEORGE, as follows:

ALBANY, N. Y., May 13, 1902.

To the Medical Society, County of Albany:

The treasurer would respectfully offer the following report:

Balance on hand May 13, 1901	$201 59
Collections during the year	198 02
	$399 61
Expenses during year	168 69
	$230 92
Less check 32	4 00
Grand total in bank to-day	$226 92

Respectfully submitted,
W. H. GEORGE.

A motion was made to refer the report to an auditing committee. The motion was carried. The president appointed Drs. Mosher, Carroll and Lomax as the committee.

Dr. T. L. CARROLL reported for the Board of Censors that the names of Drs. Anne Tefft Bingham, Elizabeth Sweet, Mary F. Sweet, Herbert D. Pease, Arthur T. Laird, Harry W. Carey and James F. Rooney had been presented and favorably considered by the censors. A motion was made and carried that the report be accepted and that the names passed upon be balloted for as usual.

There were no further reports from committees.

4. *Election of members.* Dr. WILTSE moved that the secretary cast one ballot for seven names passed upon by the Board of Censors. Carried.

The PRESIDENT declared Drs. Bingham, Elizabeth Sweet, Mary F. Sweet, Pease, Laird, Carey and Rooney to be elected members of the Society.

5. *Motions and resolutions.* Dr. VANDER VEER introduced Dr. RIXFORD, Professor of Surgery in the Cooper Medical School, San Francisco, and

moved that he be accorded the privileges of the floor. The motion was carried and the President welcomed Dr. Rixford as a guest of the Society.

Dr. BOYD said that he thought it would be well for the Society to look into the milk supply. This has been done in a number of the larger cities and has not only opened the eyes of physicians and laymen as to the importance of a sanitary milk supply, but has encouraged the milk dealers to better things. This summer would be a favorable time for such an investigation and he moved that a committee be appointed by the President to examine the existing conditions and to report in the fall. The motion was carried and the President named as such a committee Drs. Boyd, Blumer and Shaw.

Dr. MOSHER reported for the auditing committee and stated they had examined the treasurer's books and vouchers. The receipts and expenditures balanced and the books were correct.

6. *Miscellaneous business.* The SECRETARY read a request from Levi Moore that the Society authorize him to make a group photograph of its members. The sittings for the individual photographs should be at the convenience of each member and without any expense.

Dr. WILTSE thought it would be a good thing for the Society to possess such a group picture and moved that the Society authorize such a picture. Dr. CURTIS, in seconding the motion, said that he was once chairman of a committee to decorate Alumni Hall with portraits. He thought that Mr. Moore's proposition was an eminently good one if the members of the Society would only participate. It is hard to get hold of portraits of old members and to preserve them to future generations. He hoped Mr. Moore would succeed in his undertaking. The motion was carried.

7. *Amendment of by-laws.* There was no business under this head.

8. *President's address.* The President, Dr. WILLIAM H. MURRAY, delivered the following address on "An Obstetrical Experience of Thirty Years:"

Members of the County Medical Society:

I thought it might be interesting to give you a short history of the obstetrical cases I have had in thirty-two years practice of medicine in this city, not that I have anything new to offer, but thought it might be of interest to give the record of over three thousand cases. When I settled in Albany in the spring of 1870 there were only two doctors west of Hawk street, now there are forty-eight or nine. So you see there was a big field for any one who would go at all times and no questions asked about pay. The first paying case I had came from my dear friend Dr. Vander Veer. In keeping a record of presentations I recognized five, vertex, face breech and right and left lateral plane. In three thousand two hundred and forty-two cases, three thousand and forty were vertex, one hundred and sixty breech, thirty lateral plane and twelve face. Of the vertex presentations two thousand and twenty-five were left occipito-iliac, and one thousand and fifteen right occipito-iliac position. I have had eight monstrosities, nine spina-bifida cases all born alive, none living over four weeks —five of the cases were in the lumbo-sacral region, and four in the cervical. The largest new born baby I have ever seen weighed sixteen and one-quarter pounds, the smallest at full term that lived weighed just one and one-half pounds. I have attended one woman twelve times and she had five living babies when I first attended her, making seventeen full term babies for her. In 1880 I attended a woman up stairs and two hours later attended her daughter down stairs. When I was district physician my district was everything west of Eagle street. The first year I had one hundred and forty-five district and private cases, twenty in one month, fifteen of these were district cases. I attended one woman fifty-one years of age, one forty-seven, who had never been pregnant before; although she had been married twenty-two years, she had a very easy time. I have attended sixteen girls under fourteen, none of them married. I took care of a woman on the second of March and in nine months three weeks and four days attended her again, the last one apparently full term. Twice in my practice I have had four cases in one night. One lady I attended five times in seven years, each one a breech presentation and had no trouble with any of them. I have had thirty-three twin pregnancies, both children boys in eleven cases, both girls in fifteen cases, one boy and one girl in seven cases. I have signed twelve death certificates, eight of these were from eclampsia following albuminuria, three from hæmorrhage following placenta prævia, one from ruptured uterus, as post-mortem showed. While this woman was in labor on the lounge her husband came in drunk and fell with his full weight across her, she died in fifteen or twenty minutes; the child lived. I have used the forceps forty-six times, and have had thirty-seven still born babies.

It seemed to me at one time we might go through one year without a death in our society, but one of our old honored members, Dr. T. W. Nellis died a few weeks ago. We have had seven regular meetings this year. The average attendance has been thirty members, the best showing in ten years ; the excellent papers and discussions should have brought out twice that number. I am under deep obligations to the gentlemen who have contributed by their papers, voice and presence to make this last year a success.

The VICE-PRESIDENT asked for the expression of the Society in regard to the President's address.

Dr. CURTIS said he was greatly impressed with the tremendous amount of work involved in the experiences just related by Dr. Murray. He thought that no one could in more cursory language give the facts as presented by the President. The paper was exceedingly interesting to hear and he moved that a vote of thanks be tendered to the President for his address. The motion was carried and the Vice-President conveyed the thanks of the Society to Dr. Murray.

9. *Election of officers.* The PRESIDENT announced that nominations were in order for President for the ensuing year.

Dr. CURTIS said that it seemed to be his customary prerogative to nominate the President. However he disclaimed being a maker of presidents or an attendant in caucauses. He thought that the Society had illustrated this past year the advantages of having one of its older members to stand at the head, and he doubted if we could do better than follow that precedent. The Society could not honor itself more than putting in its highest office one who has so greatly honored it by his membership. He took very great pleasure in nominating for President, Dr. SAMUEL B. WARD. (Cheers.)

Dr. VANDER VEER said he fully appreciated Dr. Ward's youthful appearance and keen executive appearance. Dr. Ward's regular attendance, forceful discussions and earnest work in behalf of the Society were well known to every member of the Society. He felt it a great privilege to second the nomination of Dr. Ward.

Dr. MACDONALD moved that the Secretary cast one ballot for Dr. Ward. The motion was seconded and carried. The President announced Dr. Samuel B. Ward elected to the office of President for the ensuing year.

The PRESIDENT then stated that nominations were in order for Vice-President.

Dr. MACDONALD said that there seemed to be a disposition in the Society to form a strong organization for this next year and in order to maintain the high standard he nominated Dr. James P. Boyd for Vice-President.

The nomination was seconded and Dr. NEUMAN moved that the Secretary cast one ballot for Dr. Boyd. The motion was seconded and carried. The President declared Dr. James P. Boyd, Vice-President for the ensuing year.

The PRESIDENT stated that nominations were in order for Secretary.

Dr. MOSHER said he wished to nominate a man for what he considered the most important office of the Society. It was an office in which he was much interested because since the minutes of the Society have been printed in the ANNALS the manuscript has passed through his hands for publication. The minutes have been carefully prepared for the past two years and he wished to maintain the standard, so would nominate Dr. ARTHUR W. ELTING for Secretary.

Dr. CARROLL seconded the nomination of Dr. Elting.

Dr. VANDER VEER said he was opposed to such evidences of organization and wanted to see some of the old time election scenes. He would therefore nominate Dr. SHAW.

Dr. SHAW withdrew his name.

Dr. MACFARLANE moved that the Secretary cast one ballot for Dr. Elting. The motion was seconded and carried and the President declared Dr. Arthur W. Elting Secretary for the ensuing year.

The PRESIDENT then stated that nominations for Treasurer were in order.

Dr. WILTSE nominated Dr. W. H. GEORGE to succeed himself as Treasurer.

Dr. VANDER VEER moved that the Secretary cast one ballot for Dr. George. The motion was seconded and carried and the President announced that Dr. George was elected Treasurer for the ensuing year.

The PRESIDENT announced that nominations were in order for members of the Board of Censors.

The following names were proposed: Drs. Curtis, Mosher, Macdonald, MacFarlane and A. Vander Veer.

On motion of Dr. NEUMAN the Secretary was directed to cast one ballot for the above named gentlemen. The motion was seconded and carried and the President announced that Drs. Curtis, Mosher, Macdonald, Mac-

Farlane and A. Vander Veer comprised the Board of Censors for the ensuing year.

At the request of the President, Dr. RIXFORD made a few remarks and expressed his pleasure of attending this meeting. He found that medical politics differed very slightly from the methods in vogue on the Pacific slope. He was much interested in the President's address and thought it remarkable that one man should have had over three thousand obstetrical cases in private practice. He thanked the Society for its kind consideration.

On motion the Society adjourned.

WILLIAM H. MURRAY, *President*.

HENRY L. K. SHAW, *Secretary*.

Medical News

Edited by H. Judson Lipes, M. D.

ASSOCIATION OF GRADUATE INTERNES OF THE ALBANY HOSPITAL.—At the recent meeting of the Association of the Graduate Internes of the Albany Hospital held at the Hotel Ten Eyck, on the evening of May 6th, the following officers were elected for the ensuing year: President, Dr. C. B. Herrick, Troy, N. Y.; vice-president, Dr. G. E. Lochner, Albany; secretary and treasurer, Dr. Walter H. Conley, Albany.

ALBANY HOSPITAL TRAINING SCHOOL.—The graduating exercises of the class of 1902 of the Albany Hospital Training School for Nurses, the third class to graduate, took place May 13th, 1902, at 3 o'clock, in Female Academy hall, when ten young women received diplomas, as follows: Mae Rachel Brown, New York; Caroline Bellenger Brown, Massachusetts; Margaret Constance Hiney, Viola Minerva Swartout, Harriet Waring Park, Julia Noble Waite, Lillian Hope Athey, Emily Angelia Smith, Ellen Thomas Diack, New York; Laura Elizabeth Bull, Canada. Judge William L. Learned presided. The exercises of the afternoon opened with a musical selection by Elgie's orchestra, followed by a prayer by Rev. J. Walter Sylvester. The speaker of the afternoon, Rev. Dr. J. Lewis Park, D. D., of Calvary Church, New York, was then introduced by Judge Learned. At 5 o'clock a tea was given in the Nurses' Home. A pleasant feature of this reception was the tree planting. A procession was formed by the members of the class who marched from the home across the lawn where Miss Ellen Thomas Diack, who stood at the head of her class, on behalf of her classmates, implanted a tree amidst cheers and applause. The reception concluded with an informal dance.

ALBANY HOSPITAL FOR INCURABLES.—Albany's Hospital for Incurables has purchased twelve acres of picturesque hilltop secluded in tall forest groves, overlooking the Hudson river at Kenwood, and commanding a fine view of the capitol and the surrounding region. The trustees have begun plans for the new pavilion hospital that they will erect on this magnificent site, and request all to send subscriptions without personal solicitation to provide a suitable home for this most helpless and piteous class of sufferers. Subscriptions for the building fund may be sent to the president, Dr. William H. Murray, 269 Lark street; to the vice-president, John W. McNamara, United Traction Company, North Broadway; to the auditor, James C. Farrell, Helderberg Cement Company, Commercial Bank building; to the treasurer, Rev. Dr. Spensley, care 390 Madison avenue, Albany, or to the patronesses, Mrs. James C. Farrell, 60 Willett street, and Miss Van Vechten, 4 Lodge street. This hospital is for the relief of the sick poor of the incurable class, without distinction of race or creed.

NEW HOMEOPATHIC HOSPITAL.—The trustees of the Homeopathic Hospital have purchased the property Nos. 159 to 167 North Pearl street, inclusive. The searches have all been completed and the deeds for the property turned over to the hospital trustees. The purchase price was $12,600, and this has all been paid to the several former owners of the property. It is expected the foundation for a new centrally located hospital will have been laid by autumn. The site has a frontage of 125 feet on North Pearl street.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR APRIL.—Number of new cases, 40. *Classification of cases:* district cases reported by health physicians, 2; charity cases reported by other physicians, 25; moderate income patients, 13. *Classification of diseases:* medical, 22; surgical, 6; gynecological, 12. Of the maternity cases 9 were in the general work of the Guild and 4 in the Special Obstetrical Department (two completed cases and two still under treatment). One contagious disease in medical list. Deaths, 3.

Visits of Guild Nurses: Number of visits with nursing treatment, 650; for professional supervision of convalescents, 261; total number of visits in April, 911. Cases reported to the Guild by the city physician, by two of the health physicians, and by nineteen other physicians. The attention of physicians is called to the change in the number of the Guild telephone which is now 1802-A, Chapel.

THE YOUNG WOMEN'S SUMMER CAMP IN THE CATSKILLS.—The Young Women's Summer Camp is in the Catskill region commanding a fine view of the mountain range, which is only ten miles distant. Established in the interest of self-supporting girls and young women, and aided and maintained by the kind interest and co-operation of friends in Albany and elsewhere, it brings greatly needed rest and help each year to more than two hundred tired girls and women. This year the Camp will open June 2nd, for the especial benefit, during that month, of weary mothers and young girls who cannot possibly pay for an outing, yet who need rest and relief to be found in outdoor life in this beautiful vicinity. Camp will be open as usual during July and August to the business and working girls of our city and neighboring towns. Information will be gladly given by addressing the Young Women's Summer Camp, Catskill, N. Y., Mrs. Harriett K. Christie, 8 First street, or Miss Lucy E. Jones, 32 Elk street, Albany, N. Y.

THE ASSOCIATION OF MILITARY SURGEONS.—The eleventh annual meeting of the Association of Military Surgeons of the United States will convene in Washington, D. C., on Thursday morning, June 5, 1902, and continue in session during the two following days. Every member is cordially urged to be present and participate in all the exercises, both social and literary.

AMERICAN ORTHOPEDIC ASSOCIATION.—The sixteenth annual meeting of the American Orthopedic Association will be held in the Hotel Walton, corner of Broad and Locust streets, Philadelphia, on June 5, 6 and 7, 1902.

PRIZE ESSAY ON THE DANGERS FROM SELF-DRUGGING WITH PROPRIETARY MEDICINES.—The Colorado State Medical Society offers a prize of twenty-five dollars for the best essay, for circulation among the laity, upon the dangers of self-drugging with proprietary medicines. The competition is open to all. Essays must be typewritten in the English language, must contain not more than 3,000 words, and must be submitted before June 15, 1902. Each essay must be designated by a motto; and accompanied by a sealed envelope, bearing the same motto, and enclosing the name and address of the author. The essay receiving the prize will become the property of the Society for publication. Others will be returned to their authors. Essays should be sent to the Literature Committee, Dr. C. A. Graham, secretary, Stedman Block, Denver, Colorado.

THE WASHINGTON MEDICAL ANNALS.—In March, 1902, the initial number of a new bi-monthly medical journal appeared among our exchanges. The *Washington Medical Annals* is the official journal of the Medical Society of the District of Columbia, and in the first number also appeared the reports of the proceedings of the Clinical Society of Washington, and Society of Ophthalmologists and Otologists of Washington, and medical miscellany.

NURSES' MOVEMENT FOR REGISTRATION.—The New York State Nurses' Association completed its organization at the annual meeting held in Albany on April 15th. The officers elected are: President, Miss Isabel Merritt, Cherry Valley; 1st vice-president, Miss Julia Bailey, Rochester; 2nd vice-president, Miss E. J. Keating, Buffalo; secretary, Miss E. C. Sanford, Rochester; treasurer, Miss Mary Brooks, Saratoga; trustees, one year, Miss A. C. Maxwell, New York; two years, Miss S. F. Palmer, Rochester; three years, Miss L. L. Dock, New York. Chairman of committees: on by-laws, Miss Ida R. Palmer, Albany; legislation, Miss Eva Allerton, Rochester; publication, Miss S. F. Palmer, Rochester; credentials, Miss A. C. Maxwell, New York; finances, Mr. L. B. Sanford, New York. The society is now ready to consider seriously the question of legislation for registration, which will ultimately place training schools for nurses under the supervision of the Regents, establishing thereby a more uniform basis of nursing education in the State, and eventually making trained nursing a recognized profession. This means a great reform, to accomplish which the nurses will need the coöperation of medical journals and medical societies, as well as the support of every intelligent citizen.

The practical result of registration will be the protection of the public against imposters, of whom there are scores in every large nursing center, and a gradual raising of the standard of admission to training schools, with a more carefully prepared curriculum of both theoretical and practical instruction. In other words, better women, better nurses, fewer imposters, and a recognized profession for a great army of workers who now have no legal status. The nurses of Illinois and New Jersey are already organized for this purpose, with Colorado, North Carolina; Pennsylvania and Massachusetts agitating. The movement is also strong in England.

UNITED STATES MARINE HOSPITAL SERVICE.—A board of officers will be convened to meet at the Marine Hospital Bureau, 3 B street, S. E., Washington, D. C., Monday, June 16, 1902, for the purpose of examining candidates for admission to the grade of assistant surgeon in the U. S. Marine Hospital Service. Candidates must be between twenty-one and thirty years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to character. The following is the usual order of the examinations: 1, Physical 2, Oral. 3, Written. 4, Clinical. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on a cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. Upon appoinment the young officers are as a rule first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco. After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade. Assistant surgeons receive sixteen hundred dollars, passed assistant surgeons, two thousand dollars, and surgeons twenty-five hundred dollars a year. When quarters are not provided commutation at the rate of thirty, forty and fifty dollars a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, ten percentum in addition to the regular salary for every five years' service up to forty per centum after twenty years' service. The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address Supervising Surgeon-General, U. S. Marine Hospital Service, Washington, D. C.

PERSONALS.—Dr. G. H. WATSON (A. M. C., '79), has removed from Bridgewater, Mass., to 100 East 14th street, Brooklyn, N. Y.

—Dr. LeRoy Becker (A. M. C., '92), is now located at Cobleskill, N. Y.

—Dr. R. C. Paris, formerly of 8 Chestnut street, Albany, N. Y., has removed to 2 Mechanic street, Sandy Hill, N. Y.

—Dr. H. W. Katz (A. M. C., '97), has located at 252 Madison street, New York.

—Dr. R. E. Kinloch (A. M. C., '99), has opened his office at 283 Franklin avenue, Brooklyn, N. Y.

—Dr. Meleatus Bruce (A. M. C., '98), is practicing at Charlotteville, Schoharie County, N. Y.

—Dr. William R. Miller (A. M. C., '98), is established at Southington, Connecticut.

—Married.—Brust-Morrison: At Lansingburg, N. Y., May 1, 1902, Dr. Herbert O. Brust (A. M. C., '97), and Elizabeth Morrison, of Lansingburg. Dr. and Mrs. Brust will reside at 406 South Warren street, Syracuse, N. Y., where Dr. Brust has an excellent practice.

Book Reviews

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A., with the Collaboration of John B. Murphy, M. D., of Chicago; Alexander D. Blackader, M. D., of Montreal; H. C. Wood, M. D., of Philadelphia; T. M. Rotch, M. D., of Boston; E. Landolt, M. D., of Paris; Thomas G. Morton, M. D., and Charles H. Reed, M. D., of Philadelphia; J. W. Ballantine, M. D., of Edinburgh, and John Harold, M. D., of London, with Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume IV. Eleventh Series, 1902. Philadelphia: J. B. Lippincott Company, 1902.

In the section on therapeutics one of the noteworthy articles is that of L. Brocq, M. D., on "The Superiority of Small, Repeated Doses of Solutions of Mercurial Salts in Treating Syphilis." He finds that in many cases it is not necessary to resort to injections or inunctions of mercury and that ninety per cent. of his patients can take the drug by mouth if it is given in solution in small and repeated doses. Professor Pierre Delbet has come to the conclusion that in varicose veins the dilatation is due to excessive internal pressure resulting from incompetency of the valves of the internal saphena and that this condition is usually congenital. Dr. Charles H. Bennett reports a case of poisoning by adrenalin chloride due to a mistake in compounding a solution for a nasal spray. Dr. A. Jacobi contributes "Remarks on Strychnine," and Dr. Horatio C. Wood, Jr., the first installment of "A Description of the Methods of Investigating Drugs." There are also two articles on Climatology, one on that of Southern California and the other on that of Augusta, Georgia.

In the section on medicine, Sir Dyce Duckworth, M. D., LL. D., has an interesting paper on "Clinical Observations on Certain Diathetic Conditions." The author believes that at the present time we are making a mistake in ignoring the diatheses of the writers of the late eighteenth and early nineteenth centuries and that they will come to the front again. From his own clinical experience he thinks that there are such things as strumous and arthritic diatheses and that struma, or scrofula, is not in itself tuberculosis. He presents arguments of weight in support of his belief and his paper is a strong plea for a conservative blending of the old and new theories in pathology. Among other papers of special interest are "Winged Insects and Their Larvæ as Parasites of Man," by Dr. James J Walsh, and "The Pulse in Pneumonia in Children," by Dr. H. Oliphant Nicholson, which is illustrated by sphygmographic tracings.

Under neurology there is a clinical lecture on "The Etiology and Treatment of Acute Myelitis," by Professor G. Marinesco, who says that the cord inflammation is usually secondary to microbic infection in other parts of the body and that traumatism and cold have little to do with its production. The hope for successful treatment in the future is that there will be such an advance in serum therapy that the original infection may be overcome. Drs. Richard Cole Newton and Elizabeth Mercelis report a case of pulmonary osteo-arthropathy which is so rare a disease that they have found but seven other cases reported in this country.

In the surgical section Dr. P Quénu writes on "Exploratory Incisions in Doubtful Tumors," and shows the value of the procedure by illustrative cases. In a clinical lecture Professor Thomas Jonnesco advocates splenectomy for chronic malarial cachexia from his results in twenty-eight cases, twenty of which recovered from cachexia. There is also an interesting paper on "Suprahepatic Liver Abscess," by James Cantlie, M. A., M. B., F. R. C. S. (England), and reports of surgical clinics held by Drs. Nicholas Senn, John B. Deaver and Charles H. Chetwood.

Pædiatrics and dermatology are each represented by a single paper, the former by one on "Deformities in Children from the Standpoint of the General Practitioner," by John Madison Taylor, M. D., which is illustrated by eleven sketches. R. G. C.

The International Medical Annual. A Year Book of Treatment and Practitioners' Index. Arranged by Thirty-six Contributors. 1902. New York: E. B. Treat & Co. Pp. 688.

The fact that this work has reached the twentieth year of its existence and that it has developed to about three times its original size indicates the demand for such a volume and how satisfactorily its predecessors have filled the field.

The editorial staff continues to consist of leading practitioners in the medical profession and the abstracts are well selected and concisely and clearly made.

The practice of adding to each abstract a very brief resumé of the same subject from the preceding volume has been omitted. This allows more space for new matters but necessitates the examination of each volume when one wishes to refer to any special topic.

The subjects of toxins and antitoxins, of the clinical examination of the blood and diseases of the blood, and of fermentative dyspepsia receive very full consideration.

The volume is most valuable as a ready reference to the therapeusis of the preceding year.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, Other than Drug-Giving, useful in the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College; Physician to the Philadelphia Hospital and to the Rush Hospital for Consumption, etc. In Eleven Octavo Volumes. American, English, German and French Authors. Volume VI, *Dietotherapy and Food in Health.* By NATHAN S. DAVIS, Jr., A. M., M. D., Professor of the Principles and Practice of Medicine in Northwestern University Medical School; Physician to Mercy Hospital and Wesley Hospital, Chicago; Member American Medical Association, etc. Published by P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia, 1901. Price for the Set complete, $27.50 net.

This volume is divided into two parts, the first treating of General Principles of Diet and Diet in Health, and the second, of Diet in Disease. In Part I are reviewed the physiologic relations of diet, including chapters on the various elements and kinds of food; especial attention being given to infant-feeding and to the properties of food which may cause disease. In Part II, after a preliminary chapter on feeding the sick, the diet in infectious diseases, diseases of the stomach, blood, intestines, liver, peritoneum, respiratory and circulatory organs, kidneys, nervous system and skin is fully considered, even for the sake of exactness to the extent of repetition in some cases. The work is quite complete, and somewhat encyclopedic in character, its uses for reference being enhanced by an extensive index. It is illustrated by numerous tables of comparative values of food. The general scheme of the series, which has been revealed in the earlier volumes is followed in this volume, which may be classed with its predecessors as a creditable work.

Photographic Atlas of the Diseases of the Skin. A Series of Eighty Plates, Comprising more than One Hundred Illustrations, with Descriptive Text, and a Treatise on Cutaneous Therapeutics. By GEORGE HENRY FOX, A. M., M. D., Clinical Professor of Diseases of the Skin, College of Physician and Surgeons, New York; Consulting Dermatologist to the Board of Health, New York City; Physician to the New York Skin and Cancer Hospital, etc. Philadelphia and London: J. B. Lippincott Company, 1901.

Parts VII, VIII and IX of Fox's Atlas have been recently issued, and maintain the standard which have won for the previous numbers universal commendation. The plates of Part VII illustrate *impetigo, contagiosa, lupus serpiginosus, syphiloderma pustulosum, purpura* and *eczema cruris.* The text of this number is upon *elephantiasis, epithelioma, erysipelas, erythema, erythema multiforme,* and *favus.* In Part VIII, the plates illustrate *chloasma, chromophytosis diffusa, psoriasis circinata, lichen planus hypertrophicus,* and *tuberculosis verrucosa;* the text describing *fibroma, furunculus, herpes, and hyperidrosis.* Part IX illustrates *herpes faciei, lupus exedens, syphiloderma tuberculosum, tchthyosis* and *keloid;* and includes in the text chapters on *hypertrichosis, ichthyosis, impetigo contagiosa, keloid* and *lentigo.* These fasciculi merit the measure of praise which has been accorded the earlier numbers, and fully maintain the high character of the *Atlas.*

Current Medical Literature

PATHOLOGY

Edited by George Blumer, M. D.

The Agglutination Reaction in Infection of Different Grades. (Die Agglutinationsreacktion bei Infektionen verschiedenen Grades.)

B. J. Goldberg. *Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten, Vol. XXX, No. 16, 1901.*

Goldberg's studies had for their object to determine how soon and in what degree the agglutination phenomena appeared in animals infected with varying doses. He also attempted to determine whether the degree of immunity could be determined by the intensity of the agglutination phenomena. For his experiments he used rabbits and guinea pigs, which be infected with *B. pyocyaneus* or *B. typhosus.* In some cases he used fatal doses, in others single non-fatal doses, and in still others series of non-fatal doses. He always made two control tests of each animal's blood before injecting it. His conclusions are as follows:

1. In fatal infections the agglutination reaction remains the same as it was before infection.

2. Non-fatal doses cause an increase in the agglutinating power of the blood, but this does not reach the same degree in different animals; whilst the blood of rabbits shows marked increase in agglutinating power, the agglutinating power of guinea pigs' blood is in some cases not increased at all.

3. The reaction generally gradually increases, reaches a maximum, and then gradually decreases.

4. Whilst the agglutination properties of the blood in experimental typhoid or pyocyaneus infection increase, their intensity is not proportional to the degree of immunity.

5. An increase of agglutination properties of the blood is valuable as an early sign of the oncoming self-protection of the organism.

The results obtained by the author experimentally seem to show then, that whilst the degree of agglutination is no index to the degree of immunity, an increasing agglutinating power indicates the onset of the formation of immunizing substances.

The Existence of Large Numbers of Anopheles in a Region from which Malaria has Disappeared. (Existence des Anopheles en grand Nombre dans une région d'où le Paludisme a disparu.)

ETIENNE SERGENT. *Annales de l'Institut Pasteur, Vol. XV, No. 10, 1901.*

Sergent points out that since the discovery of Grassi establishing the relation which exists between malaria and the presence of anopheles in Italy, numerous observations made in different parts of the globe have confirmed his results. On the other hand, in places where malaria is unknown, like New Caledonia, anopheles have not been found, but only culex.

Nuttall, in England, has found anopheles, however, in places where malaria has totally disappeared, or even where it never has existed as far as is known. He explains this on the ground that it is not a question of geographical so much as of numerical distribution.

Sergent investigated a large district draining into the Essonne, which is an affluent of the Seine. Malaria had been known in this district, but had practically disappeared in the last twenty-five years. Notwithstanding this, Sergent found large numbers of anopheles throughout the district. The numbers were just as large as in certain districts in Algeria, which were markedly malarious. Nuttall's theory of a numerical distribution is therefore disproved. Sergent believes that several factors have caused the disappearance of malaria in this region. The most important of these are the repairing of the river banks with the planting of trees thereon, the improved hygiene of the inhabitants, the use of quinine.

He finally suggests that the presence of anopheles in such regions may be a danger on account of infected soldiers settling there after their return from the tropics.

Lesions of the Suprarenal Capsules in Some Acute Infectious Diseases. (Lésions des capsules surrénales dans quelques maladies infecteuses aigues.)

R. OPPENHEIM and M. LOEPER. *Archives de médicine expérimentale et d'anatomie pathologique. Vol. XIII, No. 5, 1901.*

The authors begin their paper by summarizing the results of their experimental work on the suprarenals in various infections in animals. They show that suprarenal lesions are constantly found in artificial infections in the form of congestion, rupture of the capillaries with hemorrhage, emigration of leucocytes of rather a diffuse character, or sometimes small abscesses, œdema of the connective tissue and focal necroses.

The present paper considers the lesions of the suprarenals in human beings in diphtheria, smallpox, pneumonia and intestinal infections, as typhoid.

The authors begin by criticising the commonly accepted statement that central cavities in the suprarenals are of post-mortem origin. They point out that at times the suprarenals are well preserved when there is extensive post-mortem change in other organs. They further show by classifying their autopsies according to causes of death, that these central cavities occur most frequently in infectious diseases, in intoxications, such as diabetes and uræmia, and in diseases associated with visceral congestion, as cerebral hæmorrage, and diseases causing asystole. They think the cavity formation due to hæmorrhages, which are most frequent about the central venous sinus of the gland.

In diphtheria the lesions commonly found were necroses and hæmorrhage. In complicated diphtheria (mixed infection) they found occasionally abscesses or nodules composed of lymphocytes.

In smallpox the most characteristic lesion was a lymphocytic infiltration, though hæmorrhage and necrosis also occurred.

In pneumonia hæmorrhages, at times very extensive, and wandering out of polynuclears, were common. Necroses were rare.

Only a few cases of typhoid were studied, the lesions being hæmorrhages and lymphoid nodules.

In streptococcus infections very considerable hæmorrhages and polynuclear infiltration were found.

The authors conclude by suggesting that as changes in the suprarenals are so common in acute infectious diseases, there may be some symptoms in such diseases due to the changes in these organs. They do not suggest what symptoms might occur.

Changes in the Kidney after Abdominal Operation. (Veränderungen der Niere nach Bauchhöhlen-Operationen.)

WALTER VON BRUNN. *Archiv für klinische Chirurgie, LXV, Heft 1, 1901.*

The writer has undertaken the study of the changes occurring in the kidneys of cases dying after abdominal operations, as well as of abdominal cases in which no operation was performed. His material comprises twenty-one cases in human beings and three cases in dogs. In fourteen of these cases peritonitis was present.

The macroscopical changes observed were not marked, being limited to a slight swelling of the cortex, which presented a pale, gray, cloudy appearance.

Microscopically, however, the changes were quite striking, and consisted in a marked necrosis of the cells of the convoluted tubules and ascending loop of Henle, the lumina of which tubules were practically obliterated by the swollen necrotic cells. The glomeruli were, as a rule, but slightly affected and the descending loop of Henle and the collecting tubules were practically always normal. The necrosis was decidedly more marked in some cases than in others, and in its mildest form resembled a rather severe grade of cloudy swelling. The appearance was thus similar to that seen after the action of toxic substances on the renal epithelium. In one or two instances the writer described what appeared to be attempts at regeneration of the epithelial cells.

The writer does not believe that mere opening of the abdominal cavity or the administration of an anæsthetic is in most instances responsible for these changes, nor is peritonitis in every instance accompanied by them.

Against the argument that the changes he describes may occur *post mortem,* he presents the results of studies of *post mortem* changes which occur in the kidney and which are very different from those he describes. The writer believes that toxines from the gastro-intestinal canal as well as from the peritoneum may produce the changes he describes.

In conclusion he states that necrosis of the renal epithelium after abdominal operations is very often associated with peritonitis, but that it may also occur without peritonitis. Microscopically the necrosis resembles that which occurs after any severe intoxication. Both the rapidity and intensity of its occurrence, in association with peritonitis, suggests its close relationship to the most severe intoxications with which we are familiar.

PÆDIATRICS

Edited by Henry L. K. Shaw, M. D.

A Case of Diplococcus Meningitis. (*Ueber einen Fall von Diplokoken Meningitis.*)

Tschinel. *Prager medicinische Wochenschrift, No. 46, 1901.*

The author reports this case in order to emphasize the diagnostic importance of lumbar puncture. Since Quincke demonstrated the value and safety of lumbar puncture in the diagnosis of various forms of meningitis many articles for and against this procedure have been written. The patient was 43 years old and was admitted to the hospital in a comatose condition. The pupils were dilated and there was no corneal reflex. She was so restless that an examination of the disc could not be made. The urine contained albumin and casts and there was a marked leucocytosis. No bacteria were found in the arterial or venous blood. A lumbar puncture was made and twenty cubic centimetres of a cloudy fluid were withdrawn. Cover glass preparations showed pus cells and many diplococci. These could be stained by Grams' method. Pure cultures were obtained and a white mouse inoculated and the same bacteria were found in the peritoneum. The patient died after a few days and it was found that there was a well marked chronic catarrhal rhinitis and some pus in the ethmoid cells and the small sphenoidal sinus. Pure cultures of the diplococcus of pneumonia were obtained from these places. The cerebro-spinal meningitis therefore was caused by a chronic catarrh of which there was no clinical evidence at the time of admission. The lumbar puncture gave not only the diagnosis, but also the etiology and is therefore a procedure of great value.

The Etiology of Pneumothorax in Children. (Zur Ætiologie des Pneumothorax im Kindesalter.)

Zuppinger. *Wiener klinische Wochenschrift, 1902, No. 1.*

The writer had under his observation a child two years and a half old who, while apparently perfectly well, developed during the night a right sided pneumothorax which ended fatally in twenty-four hours. The post-mortem examination showed that there had been perforation of the lung by a foreign body, a small corn husk. The cause of the pneumothorax had been considered to be a latent tuberculosis or a foreign body, although the fact that the child had always been strong and healthy and had never coughed seemed to negative both.

The evil habit of small children in sticking everything into their mouths has made the presence of foreign bodies in the air passages comparatively frequent. The results usually, however, have been the formation of ulcers and abscesses and rarely direct perforation of the lung. It is not necessary that a foreign body should be aspirated to cause a pneumothorax, as this condition has followed from the presence of foreign bodies in the œsophagus and from worms in the gastro-intestinal tract. The latter condition occurs in severe diseases where the parts have been wekaened and is not always a post-mortem result. Pneumothorax has been known to follow laryngeal diphtheria and especially whooping cough.

Of diseases inducing pneumothorax, tuberculosis is the most important, and is the causative factor in eighty to ninety per cent. of the cases. This complication, however, is much more rare in children than in adults. The author saw the condition only twice in 170 children dying of tuberculosis, and in both, measles had been the exciting cause of the pulmonary condition which latter fact had been noted by Barthez and Rilliet. The reason for this rarity is probably the fact that the formation of cavities is much less common in children.

Biach, in Vienna, noted nineteen cases of pneumothorax in 106 cases of pulmonary gangrene. As a complication of lobular pneumonia it may occur and Steffen has observed it twice in 76 cases. Pleural empyema leads comparatively frequently to pyo-pneumothorax. Leichtenstern has noted it after capillary paracentesis and has attributed it to the negative pressure induced. Several observations have been made of the occurrence of pneumothorax after whooping cough even weeks and months after the cessation of the disease. Finally there have been cases observed after bronchiectasis, hæmorrhagic infarcts and suppurative pulmonary metastases. Pneumothorax without perforation and due to the action of a gas-forming anærobic micro-organism has according to the author's view never been seen.

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ALBANY MEDICAL ANNALS

Original Communications

HOSPITAL CONSTRUCTION AND ADMINISTRATION.

A Series of Papers Presented Before the American Surgical Association, on Their Visit to the Albany Hospital, June 4, 1902.

I. THE ESSENTIALS OF MODERN HOSPITAL CONSTRUCTION.

BY ALBERT VANDER VEER, M. D.,

Attending Surgeon.

The first important point to take into consideration is the necessity that may exist for the construction of a hospital, in either village or city. To one who has given considerable thought and study to the construction of hospitals it becomes apparent that more and more is our profession being consulted, and our opinions listened to with greater earnestness, than in the past, regarding the location, etc., of hospital buildings. In the matter of raising the necessary funds we are often consulted, and it is not infrequent that the munificent gift that is suddenly presented to the public, in the form of an endowment, or for construction, has emanated from some proposition made by the physician to his patient, who may, at that time, or later on, be in a frame of mind to carry out the advice given for so worthy and benevolent an object. Then, again, it cannot be denied that there is a great responsibility resting upon the members of our profession in the advice and guidance of those who are charitably inclined but have not the experience or time to devote to the development and planning of the construction of such a plant. Funds come to us either as a princely gift, or are raised by earnest work on the part of those who believe that such an institution is called for, and from one dollar upwards their gifts are appreciated. It is more especially essential in these latter cases that the money should be expended with the utmost care. Great wisdom should also be exercised even though the sum has come from an individual or individuals known to be very wealthy. No matter how great or small the contribution, each dollar should be used with caution; therefore, there devolves upon us a responsibility that we ought not to shirk, but should be prepared to meet, and be ever ready to draw from our past experiences the lessons that will help us in the best expenditure of these funds.

Proper location of the building should always be very carefully considered. Freedom from dirt, noise, smoke and odors are the essential points, but this cannot always be secured in crowded cities. Pure air is another consideration that should always be aimed at and reached, if possible, as well as good drainage, etc., etc.

It is always desirable to secure plenty of ground. It may not seem necessary in the beginning, but a hospital successfully managed, and one that does creditable work, is sure to grow, and when space will admit the style of building should be taken into consideration. While, possibly, a two-story pavilion building may cost a little more in its administration, as compared with a four, five or six-story structure, yet the preference is largely in favor of the pavilion, and not too many stories, although there are a number of well regulated hospitals that are doing excellent work, that, from necessity, in crowded portions of cities, must build up in the air. It cannot be avoided.

The style of building and material used should always be very carefully studied. Even though money may be abundant, it is not always desirable to build of expensive material. The external appearance of the plant need not necessarily be such as to incur undue waste of money, and yet the material at the present time should be carefully considered as to the finish of the interior. We have not yet reached perfection in reference to the amount of wood to be used within the building, nor to the construction of such portions where this material must be utilized. Whatever the building material that is decided upon, it should be of such a quality as will exclude noise, odors, and not encourage the introduction of vermin, rats, mice, insects or bugs of any kind, a subject that requires very extended consideration.

Then, again, there are many essentials that pertain to the building, such as the separation of the wards, so that the work may be carried on without too great familiarity between the inmates of the adjoining wards or pavilions and of the employes. Great care should be exercised as to the relation of the wards with the serving rooms for the distributing of food, that there may be as little noise as possible,, and yet be convenient to duty rooms for nurses and for all work that must, necessarily, cause a certain amount of reverberation. Such sounds should be looked after and segregated as much as possible.

The location of the children's ward should be selected with care. It should be at such a point as not to cause disturbance to the other wards from the exuberant noises that will come from the little ones, noises that they themselves do not seem to notice, or cause them any discomfort, yet are a very great tax upon those who cannot bear these sounds.

There is no class of buildings that need such careful attention as regards light and cheerfulness as does that pertaining to a hospital. There should be no dark rooms and no dark corners or places that cannot be readily exposed to the light and inspection.

The arrangement of the autopsy room, its location, etc., should be thoroughly studied. Not placed where it is likely to attract much attention, nor where it may possibly do harm in creating a source of septic conditions, but where proper care may be taken of the dead. Proper records should be kept so that the causes of death may be accurately considered.

In the administration building proper waiting rooms, rooms for pathological work, etc., should be thought of, for in a plant, of whatever size, it must be remembered that the scientific work is part of the duty that devolves upon a well-regulated hospital.

One of the essentials in the construction of the modern hospital is that of ventilation, not yet well settled; however, certain phases of the problem are being solved, but it still remains a subject requiring the experience of the sanitary expert, combined with the good sense of practical men.

The expense and maintenance should always be taken into consideration; the ease with which the executive department may be conducted, so that the superintendent or those in authority may, without any great disturbance, and with the greatest celerity, be in constant communication with every portion of the building. The arrangement of the administration building should be such that the house staff is within easy reach at any time within the twenty-four hours, so that all official duties can be attended to with the least friction.

The proper heating of the plant should be carefully considered. Separate buildings for the heating, for generating the power that must necessarily be used about a well-regulated plant for running the elevators, for laundry purposes, for power that may be required for ventilation, for ambulance house, etc., etc., all of these should be located at such a point that patients will not be disturbed. The place for admission and departure of the ambulance should be so arranged as not to attract the attention of any patient or inmate of the hospital. The boiler-house is a very essential part of the structure, a particularly serious question when the buildings are five or more stories high.

Also the location of the kitchen is a very important consideration. Odors must not be allowed to creep into the wards, and must not reach the patient whose condition is one of anxiety from serious illness or operation.

The manner of serving food must not be overlooked. It is of the greatest importance that satisfaction be rendered to the patient in the preparation of tea, coffee, etc. All of this work should be done in such a manner as to make things as attractive as possible.

As stated, the location of the ambulance should be so arranged that we make use of all the excellent suggestions that save time in harnessing the horses, and such appliances as are employed in the fire department houses of to-day. This ambulance-house is often properly used for housing the male help, the second story being particularly available for this purpose.

These, and many other conditions, must claim the careful attention of the building committee, and of this body there must necessarily be a greater or less representation of our profession.

In the construction of the up-to-date hospital, the building for the lodging of the nurses should be constructed with great care, so that proper rest, recreation and comfort is afforded them to the fullest extent. No plant, of any size, at the present time can prosper unless it has the loyal, earnest and faithful support of competent nurses. The nurses' home should be constructed so as to afford a proper meeting place for that portion of every well-regulated hospital that is presided over by women. Where those can gather who are in charge of the training school, such as the patronesses, those who have charge of the ladies' aid society, those who do so much for the gathering and disposal of contributions, that can come only through the tact, skill and good sense of the female portion of the community, and which depends upon them in such a manner as to produce great good in the institution; these and all proper accommodations should be afforded for the encouragement of this work that is of so much assistance to every successful hospital.

This brings out a point of great importance, *i. e.*, in the care of a large plant the male and female employes should be so separated that the buildings are at some distance. All help employed about the plant, so far as possible, should be properly housed. This should be taken into consideration in the construction of the plant. Hospitals, in order to be successfully and skillfully run, must have good, prompt service from their employes. Preparations for the day must, of necessity, begin very early, the help should be on hand, and they should be properly cared for. One of our greatest generals has well said that he "cared not where the soldiers were recruited from, they might be men of doubtful character, as regards capacity for work, but if the government furnished them plenty of food, and paid them regularly and promptly, he would see that the work required of them was thoroughly well done." This applies particularly to all that pertains to the construction of hospitals. We should study this fact more carefully in the future than we have in the past. House our help well and they will help us in return.

In the construction of the plant that is to care for 150 or 500 patients, we should take into consideration the arrangement of some hall for the proper entertainments that may be given our nurses from time to time; a proper place for the lectures they are to listen to, and for the demonstrations which may be needed in giving them the instruction to which they are entitled. Careful thought should be given regarding the value to the profession that such a feature of the hospital work is to afford.

Convalescent patients should be thought of regarding some method of amusement for them. In the study of the construction of the administration building, a place should be furnished so that records can be kept with great care and accuracy. In the construction of the building, as regards the expense of maintenance, every point should be carefully studied as to the use of elevators, not providing a greater number than is absolutely required. The automatic elevator of to-day is the acme of success, so far as economy goes, and the same may be said as regards safety.

No plant can be considered complete without a building for the careful study of mental and nervous diseases, a building arranged so that if a patient is suffering from a temporary attack it will be recognized, and the stigma of an asylum or hospital for the insane removed from these unfortunate ones, unless it becomes absolutely necessary to send them there. Many cases, after a few days or weeks, return to perfect health if such accommodations can be afforded. Isolation rooms or wards for the care of contagious diseases must be remembered.

In the construction great care must be exercised in the location of the operating rooms. The day has gone by when one amphitheatre will answer for the work of an ordinary plant. Surgery has multiplied to such an extent that certain kinds of operations must be done in an operating room arranged for such work. Light here is of the utmost importance.

We must always bear in mind the necessity of a sufficient number of recovery rooms, for the care of the patient who is recovering from the administration of an anæsthetic, or who may be partially delirious, or where the conditions are so serious that life or death is in the balance. Such rooms are necessary also for the care of the seriously sick patient who has pneumonia, typhoid fever, or very acute conditions that need careful consideration and proper attention.

A room for the study of the X-ray work is a necessity. This latter feature of hospital work of to-day is a very important one. This apparatus requires a room properly ventilated, of a certain temperature, and in connection a room fitted for photographic purposes.

This is a part of the duty that devolves upon those who have before them the building of a properly constructed institution. Their plans should be so arranged that certain portions of the building can be used for strictly charity cases.

Then there should be semi-private wards, a limited number of patients in each room, and rooms for the accommodation of what may be called strictly private patients, those who wish to be entirely by themselves, and who are able to pay for such accommodations. I believe that every institution should be managed in such a way that each patient, who is able to contribute something towards its maintenance, should be encouraged to do so, and in doing this it should be made apparent to them that they are to receive something in return.

Again, when taking into consideration the material necessary for such hospital purposes, great care should be exercised in the making of the floors. This is a subject that is yet under consideration. Floors should be fireproof, and yet not to transmit sound.

The telephone system in connection with the plant should be of the best. Much depends upon a prompt message reaching some portion of the hospital at the proper time.

Obstetrical wards should be arranged with absolute freedom from the possibility of contagion or sepsis. More and more mothers are coming to good institutions, leaving hotels and boarding-houses, because of the better accommodations and greater safety that is given to them in a well regulated hospital. Here also is a necessity for private rooms. This latter feature is of great importance to every modern hospital, and concerns us, particularly, as a profession. Not only in medicine but in surgery we can here do our best work. We can take better care of our patients and accomplish more than we can from house-to-house treatment of many cases.

In the construction, maintenance and administration of a modern hospital, the board of governors or trustees should be composed not only of laymen, but there should be a representation of the medical and surgical staff. This will bring about, in the majority of instances, greater harmony and economy in both lines of duty.

Let me review a little in this subject assigned to me, and in connection with the plant we are now in. What are the good points in this recently constructed plant? We are fortunate here in that the land was furnished by the city. An easement was granted us by the Park Commissioners, so that we have no fear of our ground being encroached upon, or other buildings being constructed so as to shut off our light and ventilation. The cost of construction has been based upon an endeavor to secure such a plant as we needed without that deplorable condition of a debt, and this has been nearly accomplished. The maintenance of this hospital illustrates fully the good derived from encouraging patients to pay whenever they can for their attention. Patients who would be expected to pay for their attendance at home, hotel or boarding-house, are also expected to remunerate us for the services rendered here.

From March 1, 1901, to March 1, 1902, there were admitted into this institution 2,127 new patients. Of this number 410 were strictly charity cases; 494 paid at the rate of $5 per week; 667 paid from $8 to $10 per week, while there remained of strictly private patients 556 who paid from $15 to $35 per week for their private rooms. This method has aided very decidedly in the maintenance of the plant.

It has cost us the past fiscal year about $80,000 to maintain this plant, and our income is derived as follows: from patients, as above, a small appropriation from the city, income from invested funds, and contributions from citizens, together with special contributions. In this manner have we met our expenses.

This plant has cost about $292,000 for building and furnishing. This amount is exclusive of the land, and does not include the pavilion for the care of cases of mental diseases, which was built by the County of Albany at a cost of about $20,000. If we were to build at the present time it would cost us in the neighborhood of $80,000 to $100,000 more to duplicate this hospital.

In the preparation of the plans, the Board of Governors and staff of the Albany Hospital desire to express their gratitude to the superintendents of St. Luke's, the Presbyterian and Roosevelt Hospitals, of New York, also the Pennsylvania and Philadelphia General Hospitals; to all our friends in the medical profession, who rendered so much aid, and to our architect, Mr. Albert W. Fuller, who was indefatigable in his preparation of plans, and ever ready to make such changes as were suggested from time to time.

This plant will accommodate 200, but by a little crowding we can provide for 225 patients.

II. PAVILION F.

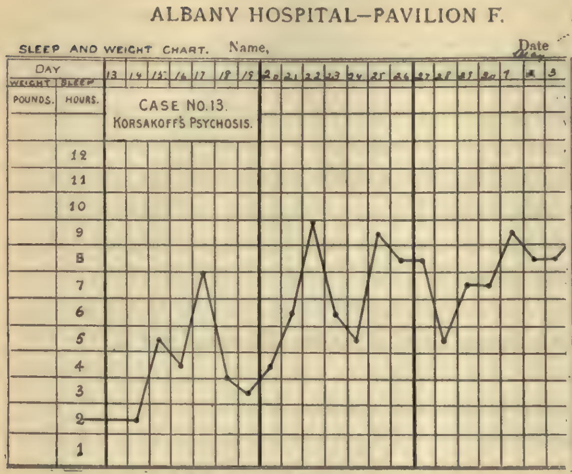
By J. M. MOSHER, M. D.,
Attending Specialist in Mental Diseases.

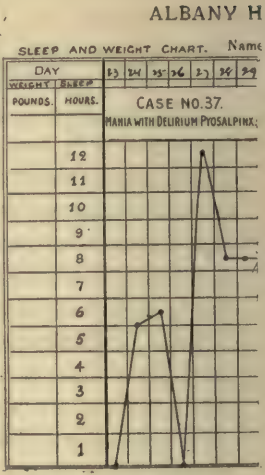
The small pavilion for mental and nervous disorders, which you have just seen, is the only one of its kind in the United States, and shows, we think, a step forward in hospital administration and in the treatment of this class of cases. This work has not been undertaken by the general hospital since the removal in 1841 of the insane patients from the Pennsylvania Hospital to its special separate department for the insane in West Philadelphia. Although the care of the insane in hospitals built for them is in the greatest degree worthy of our profession, there will probably always be disinclination and hesitation on the part of the friends of the insane to seek a commitment which carries with it the stigma of a mind destroyed, and needs legal measures which proclaim the patient an incompetent person. And yet, often enough, the mental disorder is no worse, if rightly treated, than the delirium of acute fever.

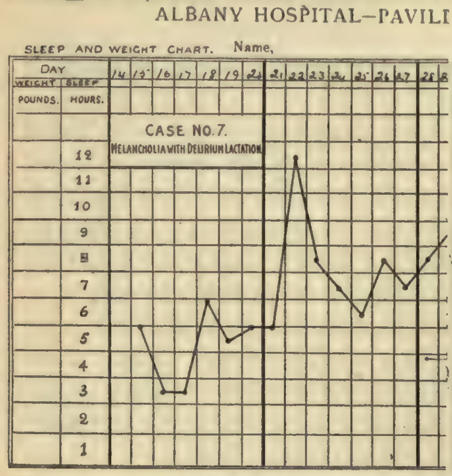
The greatest wrongs to persons mentally afflicted arise from the lack of understanding of the illness by the family and the practicing physician. Mismanagement and delay in removal from home are the obstacles to recovery which our new pavilion has been built to overcome. We are yet too young in experience to formulate our results, or to predict our future. In less than four months there have been forty admissions. There have been several cases of alcoholism whose goal otherwise would have been the police station or the hospital for the insane. There have been two cases of violent delirium, one during lactation, another due to surgical disease of the uterine adnexa. The clinical charts of these two cases show that the return of health was counted by days and not by weeks or months. There have been several cases of neurasthenia and hysteria, with intermitting delusions, grafted upon special sense disturbance, which are known in the literature as "borderland cases," in the dangerous period in which insanity threatens. In these cases insanity has been averted, and the patients have been directed toward recovery instead of toward a long and critical illness. As a department of the hospital the pavilion has given relief to trying conditions. Patients with transient mental symptoms in the course of medical and surgical diseases, shown by sudden attacks of frenzy and

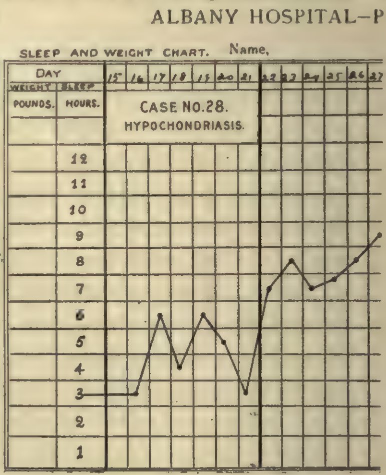
To Illustrate Dr. Mosher's Article on "Pavilion F."

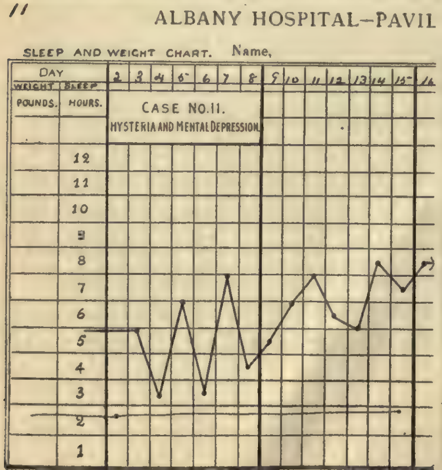
Albany Medical Annals, July, 1902.

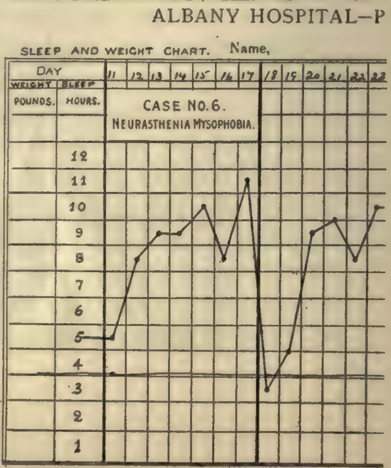












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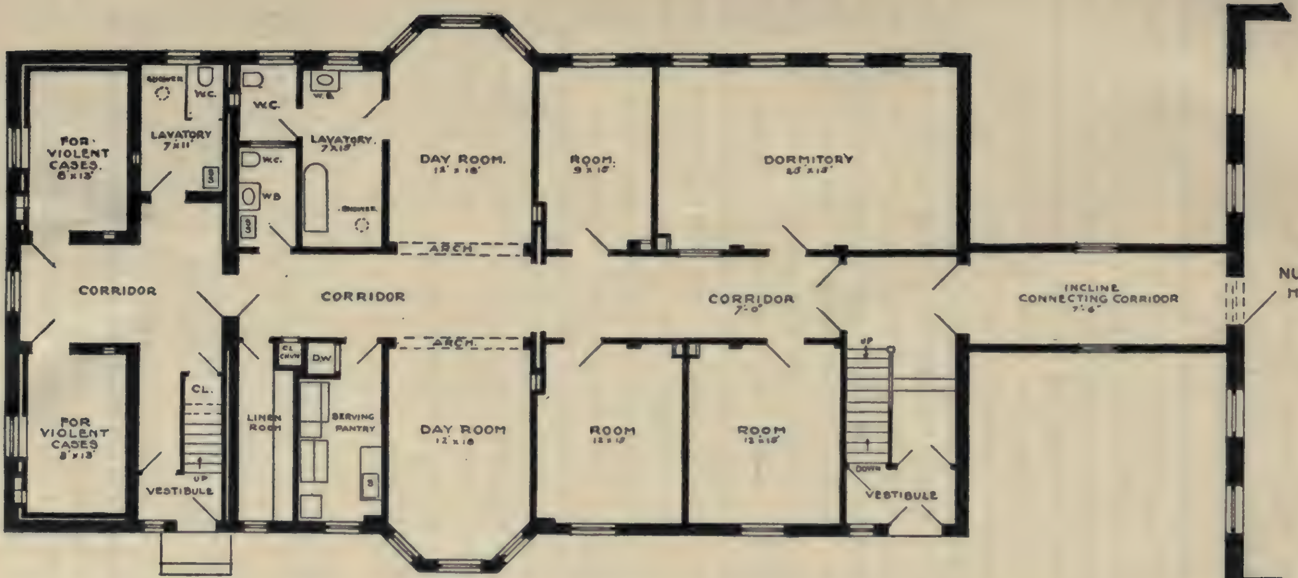

FIRST FLOOR PLAN.

A.W. FULLER, } ARCHITECTS.
W.B. PITCHER } ALBANY, N.Y.

delirium, aggravated by the activities of the general wards, have found peace and comfort. In short, any patient presenting any nervous symptom making him unfit for either his home or the hospital has here found a refuge.

The principle of treatment is expectancy. The plan of the pavilion is such that the uneasiness and noise of mania and delirium give no annoyance to others, and no repressive measures, either mechanical or chemical, have been necessary. The elimination of toxic products and re-establishment of nutrition have led to natural sleep, and, after the first prolonged sleep, the patient causes no further anxiety to the physician.

During the next college term the senior students, in sections, will receive bedside clinical instruction in psychiatry, and the didactic lecture will fall to its proper subordinate place.

Thus we have on the east wing and on the west wing of our hospital two pavilions representing the extremes of practice. In the one are daily enacted the dramatic and heroic scenes of modern surgery, in which time is counted by minutes and seconds. In the other is the medical Fabius, carefully watching each phase, battling not only for life but for the mind, and attaining by tenacity and the courage of delay what his surgical colleague achieves in an instant by a turn of the wrist. Not the least glory of our surgeons has been their loyal co-operation in the promotion of these medical ideals. Soon, by united effort, this splendid hospital system will be completed by a pavilion for contagious diseases. Then it will be possible to bid welcome to every sick person, without regard to condition in life or of disease, and thus to meet in full the obligation imposed by Fabiola, the founder of the first hospital.

III. THE METHOD EMPLOYED IN EXAMINING AND RECORDING PATHOLOGICAL MATERIAL.

BY GEORGE BLUMER, M. D.,
Pathologist.

It may be of interest to the members of the association to know the methods which are now in use for the preservation and examination of pathological material.

The treatment of scrapings and ordinary specimens is different. The scrapings are placed immediately after removal in ninety-five per cent. alcohol. Ordinary specimens, inasmuch as the laboratory is some little distance from the hospital, are wrapped in moist gauze, then in oiled linen. For ordinary purposes we use as a hardening fluid Orth's fluid, which is ten per cent. formalin added to Müller's fluid. Embedding is generally done by the celloidin method. For rapid diagnosis we employ the oil of cloves celloidin method. This consists of making up a solution of celloidin which contains about twenty-five per cent. oil of cloves, the presence of this material causing the celloidin to penetrate very quickly. We occasionally use also the frozen section method, but in our experience this is at times unreliable, especially in connection with the diagnosis of certain forms of sarcoma and their differentiating from granulation tissue.

The records of cases are kept upon separate sheets with a cover, and the diagnosis and the patient's name are card indexed. The specimens from different portions of the body are classified according to a decimal system, and each receives two numbers, a classification number and an accession number. Fuller details regarding this method of classification may be found in a paper by the speaker in the ALBANY MEDICAL ANNALS for November, 1898.

Autopsy records are also kept on separate sheets bound in a cover, and are card indexed both as regards the patient's name and the pathological conditions present.

The results of the pathological examinations are reported to the hospital on special pathological sheets, which are added to the hospital histories.

IV. ASEPTIC TECHNIQUE IN THE ALBANY HOSPITAL

BY C. H. RICHARDSON, M. D.,

Assistant Attending Surgeon.

Gentlemen of The American Surgical Association:

I have been asked to give you, very briefly, an outline of the aseptic surgical technique employed in this hospital.

Of course, you all readily appreciate that the few moments alloted to me will not permit of minute detail. Yet, the underlying vital principle in any perfect surgical technique is one of detail. It is one of aseptic contact rather than surroundings; "breaks in technique" are only avoided by the consistency with which this principle is carried out. Tile work, marble, brass and plate glass are very desirable and attractive, but not absolutely necessary for good work.

Nearly everything that is employed in and about the operating room is sterilized by boiling water, or steam when possible; the only surgical materials used by us not so sterilized are such as will not permit of it, as catgut, iodoform gauze and soft urethral instruments.

The clothing worn by the surgeons, assistants and nurses is of white duck; the coats button tightly about the neck and the sleeves cut off above the elbow. The suits for each person are folded in separate packages, with a cap which fits snugly over the ears, completely covering the hair, and are sterilized in the regular Kny-Scheerer steam pressure sterilizer. Street clothes are never worn in the operating room by anyone having any connection whatsoever with the operation. Visitors are required to wear long linen gowns which cover their clothing more or less completely.

After the suits are put on and the hands are surgically cleansed, a sterilized linen apron is used to cover the whole front of the suit,—the suit having been more or less contaminated during the act of changing the clothing. The aprons are not used until the operation is about to begin.

For cleansing the hands, we use the modified Fürbringer method; first, five minutes vigorous scrubbing of the hands, forearms and arms with brush and green soap incorporated with marble dust, paying special attention to cleansing about the nails and webs of the fingers; pointed orange wood sticks are used in preference to metallic nail cleaners, thereby avoiding scratching the nails which renders them more difficult of cleansing. A liberal dash of turpentine is now rubbed in until a creamy emulsion is formed, which acts as an antiseptic but is used principally to emulsify the sebaceous fatty material of the skin. The hands are then thoroughly rinsed in two or three basins of sterile water until all odor of turpentine disappears. They are then immersed and thoroughly rinsed in a ninety-five per cent. alcohol, which further frees the hands from any greasy material that may remain. The hands and arms, to a point well above the elbows, are now submerged in a 1-1000 bichloride of mercury solution for two minutes; the rubber gloves are then drawn on under the bichloride solution.

It has been our practice for the past two or three years to wear rubber gloves for practically every operation that is done, and by so doing have accustomed ourselves to their use. As the tactile sense is educated to their use, we find no difficulty in doing the most delicate operation with gloves. We wear rubber gloves in aseptic cases to protect the patient from us; w ewear them in septic cases to protect us from the patient. We wear them in all cases to protect the succeeding patient, whom we do not know, against his predecessor.

The gloves worn by the surgeon and first assistant are the Hodgman vulcanized thin gum seamed gloves; the heavy and less expensive seamless gloves are worn by all the assistants and nurses; they are sterilized by washing in soda solution to remove the blood and fatty material and then boiled for fifteen minutes in water and are transferred with sterile forceps to a large arm basin of sublimate solution in which they are kept until used; the gloved hand is washed in sterile normal salt solution, immediately before the incision is made.

The instrument stands, etc., are covered with sterile towels; instrument trays, sponge basins, salt solution basins and all enamelled ware used for any purpose about the operation are boiled in a large boiler operated by steam for that purpose. Instruments, etc., are boiled in a one per cent. soda solution and kept under water in an enamelled instrument tray during the course of the operation. I think this is a decided advantage over laying them on towels and exposing them to contact with the atmosphere.

All the necessary material for each case, such as sheets, pillow cases, towels, gauze sponges, abdominal sponges, complete dressings, bandages and the like, are packed beforehand in separate packages and sterilized in the steam pressure sterilizer and are not opened until ready for use. We use the gauze sponges in abdominal work exclusively. They are counted by the operating room nurse when they are put up with the general package, are recounted by the first assistant immediatly before the operation, and again by the operating room nurse after the operation is finished.

Catgut and animal sutures are sterilized by the Cumol method; the Cumol sterilizer is an ingenious mechanical apparatus devised by Clarke, of Philadelphia, to carry out the original idea of Kronig. By the use of the instrument this can be done with absolute safety as regards fire.

You are doubtless all familiar with the method; the process, in brief, is (1) cut the gut into the desired lengths, roll into a figure eight form and tie the isthmus with fine silk; (2) suspend the gut in the wire gauze frame (which fits the interior of the Cumol sterilizer) taking care that the gut does not come in contact with the metal at any point; (3) place the wire frame in a dry heat oven, raise the heat to between 60° and 70° C. for first hour; between 70° and 80° C. second hour, and third hour at 80° C.; this dries the gut thoroughly; (4) transfer the frames from the oven to the Cumol in the sterilizer, which should show a temperature of 100° C. at the time; gradually raise this to 150 degrees and hold at that point one hour; (5) take the frames out of the Cumol with sterilized forceps, rub them in sterilized towels and replace in dry oven (temperature 100°) for two hours; this evaporates the Cumol and dries the gut, and, if the process is properly done, no odor of the Cumol can be detected; (6) transfer the sutures with sterile forceps into previously sterilized test tubes, mark sizes on these and close them with aseptic cotton wool plugs. By the above process no water comes in contact with the suture material,—hence, its strength is not impaired. Numerous bacteriological tests have shown it to be absolutely aseptic. However, it is our custom to have each batch tested at the laboratory before it is used.

The silkworm gut employed in this hospital is prepared by a method which dyes it black; this is a distinct advantage in certain classes of work where the color enables it to be seen and easily removed.

The process (for 400 strands): In an agate ware basin place a six per cent. nitrate of silver solution, in which the gut is deposited when cold; allow it to heat over a slow Bunsen burner until it steams or simmers for twenty minutes, being careful not to let it boil at any time; stir the gut constantly with a glass rod and turn it frequently. This must be done at night or in a dark room; a pound of ordinary Rochelle salts is now added as a reducing agent. This acts on the solution by reducing the free metallic silver, which is deposited, but does not act on the silver absorbed by the silkworm gut. In the morning the strands are washed in sterile water and exposed in a large Petrie dish for an hour to the actinic rays of the sun. It is colored a very dark brown, which afterwards turns black and is permanent. It is now polished by means of a cloth or towel, six strands are made into a figure eight bunch and two of these bunches, enough for one case, are put into a clean test tube and sealed with cotton wool. It is now subjected to the steam sterilizer, the same as dressings. We use the best China twist silk that can be obtained, in sizes ranging from No. 00 to No. 4.

The silk is tightly wound from the skein on nickle-plated metal frames two inches wide by six inches long, usually three skeins of each size are prepared at a time; they are then rubbed in a towel and placed in boiling distilled water for ten minutes, after which they are transferred to the slow dry heat oven, never raised above body temperature, and allowed to dry for five or six hours. If this is carefully done the silk does not "crumple" or untwist, but presents a smooth sort of translucent waxy appearance. Twenty feet of each size is wound on separate spools placed in a previously sterilized ignition tube, which is sealed with loose cotton for a plug, and then the whole tube is subjected to the regular steam pressure sterilizer. The tube remains sterile until used.

Silver foil is sterilized in plugged test tubes in the autoclave.

Iodoform gauze is manufactured in the hospital under strict asepsis. The soap, suds, glycerine, five per cent. carbolic solution and gauze are sterilized, the nurse when making it wears sterile rubber gloves; the desired lengths are then wound in a loose roll and placed in the large ignition tube, plugged loosely with cotton wool and subjected for twelve hours to formaldehyde gas.

Salt solution is made up in a concentrated form and sterilized in flasks in a steam sterilizer. By adding 125 cubic centimeters to a gallon of distilled boiled water from the apparatus in the sterilizing room a six-tenths of one per cent. or normal salt solution is readily obtained for any purpose required, such as infusions or flushing the abdominal cavity.

Urethral instruments are rendered aseptic by washing with soap and water and subjected for twelve hours to the fumes of formaldehyde gas and kept in sealed glass tubes until ready for use.

Trusting that this brief outline will give you some idea of aseptic technique as we intrepret it, I beg to thank you very sincerely for your kind attention.

V. REMARKS ON THE METHOD OF KEEPING HISTORIES OF SURGICAL PATIENTS IN THE ALBANY HOSPITAL

By ARTHUR W. ELTING, M. D.,

Chief of the Surgical Clinic

One of the most important functions of every well-conducted hospital is the collection and preservation of accurate and systematic records of the patients who may be treated in the hospital. From a somewhat extended study of the methods employed for the keeping of records in a considerable number of the larger hospitals in the United States, it is very evident that there is no uniformity of opinion as to the best method to be employed. The system in use in this hospital was instituted two years ago, and the practicability of the scheme has been amply proven by the results, sufficient time having elapsed to allow us to discover and remedy any defects that may have presented themselves.

Let us first enumerate the different blanks which are used in keeping a history of a surgical case. The first history sheet enables one at a glance to determine the more important data regarding the case and in a conspicuous place contains the name, diagnosis and surgical number. The second history sheet presents the history of the patient both present and past, as well as the physical examination. The third sheet contains a description of the operation, if one was performed, and it is the rule of the institution that the first assistant at every operation shall be held responsible for a description of the same. The fourth sheet is specially ruled and contains the surgeon's orders. The fifth sheet, also specially ruled, is devoted to the bedside notes and is kept by the nurse in charge. The sixth sheet comprises the temperature chart, while the seventh sheet presents the urine analysis, the blood and sputum examination, etc., and lastly is the pathological sheet which states briefly the macroscopical as well as the microscopical diagnosis of any tissues removed at the time of operation, as well as the result of any bacteriological examination that may have been made.

A separate book is kept in which the name of every surgical patient is entered, as well as the date of admission, and in which each surgical patient is given a surgical number at the time of admission. Opposite the name the diagnosis is also written in this book at the time of discharge from the hospital. The surgical numbers begin at one and will continue indefinitely, so that there will never be any danger of two patients receiving the same number.

A card catalogue of all surgical patients is kept, and is arranged alphabetically according to the name of the patients. This card is specially ruled and upon it appears the name of the patient, the date of admission, the diagnosis and the name of the attending surgeon.

The histories are kept in boxes and the method of classification is an arbitrary one according to disease. The histories are so arranged in these boxes that the latest case of any particular disease is upon the top and the next latest history is just beneath. It is thus comparatively easy to find the history of any patient provided we are given the name, for the card index gives us the diagnosis and the surgical number. The diagnosis indicates in what box the history will be found, and the surgical number indicates about where in the box to look for the history. As the boxes become filled the histories are removed and done up in bundles of fifty each, and on the outside of each bundle is a slip of paper containing the name, surgical number and the attending surgeon of each of the histories contained in the package. Thus easy access can be had to histories no matter how long ago they may have been filed away.

THE INFLUENCE OF THE DISCOVERY OF THE RELATION OF BACTERIA TO DISEASE ON THE PRACTICE OF MEDICINE EXCLUSIVE OF SURGERY.

Awarded the Schuyler Alumni Prize for 1901.

By H. JUDSON LIPES, M. D.,

Lecturer on Obstetrics, Albany Medical College; Obstetrician to the Albany Guild for the Care of the Sick Poor.

(*Continued from page 318*, Albany Medical Annals, *June, 1902*.)

Like all branches of theoretical and practical medicine, bacteriology owes much of its early advancement to the leaders of the Prussian Army Medical Department. The Prussian surgeon Struck, as head of the Imperial Board of Health in Berlin, took the initiative in creating the first standard working laboratory which served as a model for all subsequent institutions. Without this powerful aid Koch could not have developed his pioneer methods. Earlier pupils of the Army Medical School, like Helmholtz, Virchow, Reichert, Leyden, Fisher, and Nothnagle had already achieved important professional positions; and up on the establishment of hygienic and bacteriological laboratories and the creation of professorships, German army physicians, and chiefly indeed those who were pupils of this institute, appeared as workers of the first rank. Among these we may name Behring, Buchner, Fischer, Gärtner, Gaffky, Löffler, R. Pfeiffer and Schrötter.

In order to appreciate the vast difference between the present existing methods of diagnosis and treatment and those which were in vogue prior to the discovery of the bacteriologists, let us go back to the early part of the century just passed.

Advances in Medicine in the Eighteenth Century

In the Fourth Volume of the *Medical Repository* is printed a paper of special interest to us, entitled "The Improvements, Progress and State of Medicine in the Eighteenth Century." This paper was read before the Medical society of South Carolina on the first day of the nineteenth century. No doubt the writer made as much of his subject as possible and the list of the discoveries and developments of the hundred years then just passed was as follows: Improvements in anatomy in the preparation of specimens; new operations in surgery; instruction of the deaf; experiments with poison on living animals; establishment of humane societies; cool regimen in fevers and small-pox; establishment of medical societies, hospitals and infirmaries; improvement and simplification of the materia medica; discoveries in chemistry; triumph of physic over small-pox by inoculation and over scurvy by vegetable diet and oxygen; and the abatement of plague and pestilential fevers. At that time these were considered wonderful advances, but appear to us, no doubt, as will a description of the advances made during the nineteenth century to an observer a hundred years hence.

Treatment of Disease in the early part of the nineteenth century.—In the early part of the nineteenth century the recognized methods of treatment were blood-letting, blisters, cathartics and emetics without any reference to the diseased condition, and it was heresy to advocate any other methods. People who fell victims to disease, died often because of the heroic measures employed to counteract the maladies which afflicted them. Indeed, many physicians began to feel that more patients would recover if nature was left unaided to fight the disease. Few, however, had the temerity to voice these sentiments, and the few that did, suffered ostracism because of their expressed views. In England Sir John Forbes incurred the displeasure and contempt of his fellow practitioners by expressing his belief that no treatment at all was better than the treatment then in vogue. This was the condition of affairs in the early part of the nineteenth century, and it is little wonder that when Hahnemann began to teach his doctrines he soon found many followers.

Domination of Systems of Medicine.—At the beginning of the nineteenth century, the so-called systems dominated the practice of medicine, for every prominent man considered it incumbent upon prominence in their profession to promulgate a complete personal theory of medicine, to which all facts, if necessary, must be clipped or stretched to fit. Boerhaave considered that disease was due to the laxity or rigidity of the solids and the acidity or alkalinity of the fluids of the body, as the most important of all. Hoffman made diseases dependent upon the motions and moving powers of the animal economy. Rosari was the author of a system by which patients were treated with enormous doses of powerful and poisonous drugs, and cases were related at length of persons with slight illness slowly dying, poisoned by aconite, tartar emetic and digitalis. To this and the unmentionable "system of isopathy," homeopathy was to some extent a reaction.

Medical Periodicals of 1800.—An examination of the medical periodicals of one hundred years ago is of greater assistance in showing what the physician of that time was interested in, than a similar examination of the more formal medical treatise. The latter was more under the influence of the moribund theories of medicine.

There seemed to be a tendency to the publication of papers describing epidemics in comparatively remote countries such as the West Indies, numerous articles on chemistry, of varying degrees of absurdity, *e. g.* a paper proving that water could be entirely converted into air by repeated freezing. Another long paper on observations on the "Influence of the Moon on Climate and the Animal Economy;" with a proper method of treatment of diseases when under the power of that luminary. An abstract of a paper on "Sick Headach" was read before the Hartford County (Conn.) Society in September, 1797, (*Medical Repository,* 1798) by Dr. Nathaniel Dwight. His treatment was "half a pint of hard cider drank on an empty stomach in the morning." Some one has wittingly said: "We must conclude that if the 'headach' sees fit to appear after dinner it must wait 'till the next day for treatment.'"

Death of Washington.—The illness and death of Washington, occurring so near the close of the eighteenth century, caused by an acute disease, demanding energetic and intelligent treatment, as well as the great prominence of the patient, naturally attracts attention, as the management of his case affords an example of the most approved treatment of that day, and shows, in one instance, the great benefit derived from bacteriological researches to-day. From the popular record of his illness in Irving's Life, it would appear that he died from laryngeal diphtheria after an illness of about one day and that the principal treatment was large and repeated blood-letting and external applications and that the symptoms steadily increased until death. A consultant proposed tracheotomy, but it was rejected,—instead the lancet was once more resorted to.

Several hours before his decease, after repeated efforts to be understood, he succeeded in expressing a desire that he might be permitted to die without interruption.

The treatment, therefore, of an old man, sick with a disease very exhausting to vitality, and so severe that the illness lasted but twenty-four hours, consisted in the abstraction of between two and three quarts of blood, the administration of about twenty grains of calomel and seven grains of tartar emetic, an injection, with external application of a blister—and "he pressed his hand in silence, retired from the bedside, and sat by the fire absorbed in grief," to quote from the attending physician, Dr. Craik.

If we note the contrast between the fanciful and changeable theories of medicine in 1800, and the well-grounded and stable theories of to-day; the practically non-existent physiology of 1800, and the physiology of to-day; the surgery of 1800, with anæsthesia and antisepsis and surgery of to-day; the therapeutics of 1800, with the domination of the lancet, prostrating emetics and cathartics, and modern treatment; the guesswork diagnosis of 1800 and the scientific investigations of the functions of the body with instruments of precision and of its organs by many well-adapted means to-day including the vast advances made in diagnosis through the studies of the bacteriologist; the wild theories of etiology prevalent in 1800, with the present steadily lengthening list of the diseases, the exciting cause of which is certain—we shall be assured that medicine stands abreast of other arts and sciences in the century's advance and this largely, particularly in the last two decades, through the work of the bacteriologist.

The physician of 1800 had some knowledge of anatomy, it is true, but small practical use could be made of it in the absence of correct physiology and microscopical anatomy. The acromatic microscope, anæsthesia, and the cell theory toward the middle of the century, and later the subject of bacteriology with antisepsis, powerfully aided this advance and with steadily increasing rapidity medicine has become what it is to-day.

The subject assigned for this essay is assuredly a broad one, and inasmuch as the line of demarkation between medical and surgical diseases is not a definite one—it depending somewhat upon the writer's position—the subject matter of this essay may not, in the opinion of some readers, be confined entirely to diseases clearly medical, but may enter somewhat the realms of surgery.

Dividing line between Medical and Surgical Diseases

Our later works on surgery and medicine overlaps and must always do so more or less. But since modern therapeutics is far more logical and definite the diseases have been reclassified with the result that many lesions hitherto treated medically, are now clearly surgical conditions calling for surgical interference; while other diseases, *e. g.* diphtheria, which especially in the severer cases usually demanded surgical treatment, are now, through the results of the researches of the bacteriologists, confined almost entirely to the general medical practitioner.

According to "Gould," surgery was formerly that branch of medicine concerned with manual operations under the direction of the physician. The scope of the word is now widened and so bound up with general medicine that a succinct definition is impossible. Instrumental and manual operative work is still the chief idea, and, so far as it is related to diseases commonly or possibly requiring operative procedure, surgery usually includes the treatment of systemic abnormalities. The surgeon has recouped himself by the inclusion in his department of many purely medical subjects not strictly requiring operative treatment, such as inflammations, micro-biology, syphillis, *et cetera.*

Present Position of Obstetrics and Surgery

Obstetrics, practically surgical in every way, is a subject almost always occupying the attention of the family physician. The present exalted position of aseptic midwifery and surgery is almost entirely due to the results of bacteriological studies. Having learned that the great danger of infection results from the transfer of pathogenic bacteria to wound surfaces by the hands or instruments of the operator or his assistants; that pyogenic bacteria are found on the surface of the body, of the mucous membranes in healthy persons; and that sterilization of the hands of the surgeon or obstetrician or of the surface through which incisions are to be made, can be effected by certain procedures which have been elaborated by the experimental methods now in vogue, aseptic surgery and obstetrics take the place as national methods founded upon scientific observation.

Effect of Study of Bacteriology on Medicine in General

In the further discussion of our subject under "Treatment of Disease" we shall see, without doubt, how Hygiene and Sanitary Science, or Preventive Medicine as it is now properly termed, have been immensely benefited by the researches of bacteriologists. It is true, that sanitarians had obtained, by observation and empirical methods, important data upon which to found their recommendations before we had any knowledge of pathogenic bacteria, but it is also true that in the absence of this knowledge their recommendations were often inadequate and contradictory and were without the authority which comes from an exact experimental basis.

This prevention of infection becomes the first duty of the surgeon and obstetrician as well as the physician and sanitary official. And the necessity for treating infected wounds, puerperal septicæmia, or local epidemics of infectious diseases, in the light of our present knowledge, is a reproach which attaches to some individual or corporation.

Protozoa included.—While the term "bacteria" does not include the parasite of malaria, nor the protozoa—the smaller group of the animal parasites—which may prove to be the source of infection in many diseases, such as the exanthemata in one of which

—smallpox—they have already been apparently found, still we believe the consideration of the organisms of these diseases is within the domain of the subject assigned.

There is no department of clinical medicine, which we will now consider, which has not relations to bacteriology.

Relation of Bacteriology to all Departments of Clinical Medicine

The whole subject has been revolutionized. Text-books written even within the last decade are already out of date and, since the almost daily discoveries in the realms of bacteriology are so important, the interim between the writing and publication of works on medicine often necessitates "addenda" to bring the book up to date.

The etiology of many diseases formerly merely conjectural, as we have seen, is now positively known. Diagnosis has been materially aided, symptomatology and course of disease is far better understood since we know the causes at work; and, too, the prognosis and treatment is in many cases no longer a matter of guess work nor of empiricism.

(*To be continued*)

Clinical and Pathological Notes

A Case of Lymphatic Leukaemia, Showing Degeneration of the Postero-Internal Columns of the Spinal Cord. By HERMON C. GORDINIER, M. D., *and* AUGUST J. LARTIGAU, M. D.

December 8, 1895. Mrs. R., aged 63, born in Ireland, married 42 years; has had seven children, four of whom are living and in perfect helath. Of the three dead, two died of diphtheria and one of some form of paralysis. No miscarriages. Her father died from the result of fractured ribs. Cause of death of mother unknown. No tubercular history in family; never has had malaria. Husband has always been a healthy man; died in 1875 of pneumonia. Patient never had had any illness until fifteen years ago when she was injured from the result of a fall on an icy sidewalk. She struck on her face and forehead, producing a contused wound which healed in four or five weeks. About five years ago the patient developed corneal ulcers which healed very slowly. At about the same time ulcers appeared over both tibiæ. Six months later a deep ulcer appeared on left frontal bone near median line which extended to the bone, resulting in its exfoliation,—the resulting wound healed very tardily. In the spring of 1894 the patient noticed a swelling of the glands (suboccipital) on the right side of the neck; seven months later the glands of the corresponding side of the neck became enlarged. In October of 1895 she was conscious of the presence of enlarged glands in the arm-pits. During this whole period she had gradually lost flesh and strength and has had frequent dizzy attacks with tinnitus aurium. Headache very infrequent. Has periodical attacks of diarrhœa and vomiting. Never has had epistaxis or hemorrhage from any mucous surface.

Physical examination. Patient is short and spare, emaciated, very pale and has a distinctly sallow complexion; appears prematurely old. Two depressed very delicate white cicatrices exist on the skin covering the frontal bone, one on the left side, the other on the right side near the median line. Tongue pale, flabby and indented on edges by the teeth, slightly coated; buccal and pharyngeal mucous membranes very pale; tonsils normal in size. Neck greatly deformed owing to the enormous enlargement on each side of the lymphatic glands. This enlargement is greater on the right side and involves both the superficial and deep lymph glands. The sub-maxillary, sub-occipital and supraclavicular glands are enlarged, and vary in size from that of a small bean to that of a hen's egg. They are freely movable, are firm and resisting, and elastic to the touch. The glands in the axillæ are about the size of pigeon's eggs; those on the right side being larger. The epitrochlear and inguinal glands are about equally enlarged and vary in size from a bean to a horsechestnut. Mesenteric and retroperitoneal glands enlarged and easily palpable. Examination of lungs negative. Cardiac dullness normal; no adventitious sounds, heart sounds weak, no venous hum in vessels of neck; pulse 80, soft and compressible, no atheroma of radials or temporals. Arcus senilis absent, no dullness over manubrium; thyroid not enlarged; liver not palpable, no increased dullness of it. Splenic dullness normal. Abdominal walls very flabby, a small mass (evidently enlarged glands) the size of an egg could be easily palpated one inch to the left of McBurney's point. Percussion of the lower end of the sternum elicited marked tenderness; percussion of ribs and other long bones, as well as spine and skull, elicits no tenderness. No muscular or nerve tenderness. Right pupil smaller than left; both react normally to light and accommodation. No cranial nerve involvement. Urinary examination, apart from showing a large deposit of uric acid crystals, was entirely negative.

Blood examination. Red corpuscles, 3,500,00 per c. m., whites, 300,000. The red cells exhibited considerable deformity (poikilocytosis); white cells consisted mostly of small mononuclear leucocytes (lymphocytes). A few eosinophiles were present, but were very rare. Several large lymphocytes and a few polynuclear leucocytes were present; no myelocytes were observed. Numerous elementary granules were found. No nucleated red cells.

The treatment consisted of the use of potassium iodide in conjunction with mercury. These remedies were given because of a supposed syphilitic infection. She tolerated them only a few days when they had to be discontinued. She was then given arsenic in the form of Fowler's solution up to fifteen minims thrice daily.

January 4th, 1896. Seemingly much improved, anæmia less, glands reducing in size, appetite better, less breathless; blood, *vide supra.*

February 10th, 1896. Patient quite ill, glands increasing in size; attacks of vertigo common, white corpuscles, 350,000 c. m.; reds, 3,800,000. Hæmoglobin , 70 per cent. Arsenic discontinued; bone marrow substituted March 28th, 1896. No improvement after six weeks of continuous use of bone-marrow. Glands much increased in size, patient very weak, frequently falls during attacks of vertigo, which attacks closely resemble Ménière's disease.

Blood. No count of corpuscles made. Red corpuscles show considerable deformity and vacuolation. No nucleated red cells discoverable. One eosinophile could be seen to every fourth or fifth field with one-twelfth oil immersion. Neutrophiles were comparatively rare. Small lymphocytes very abundant. One to three large lymphocytes to every field. No increased splenic or liver dullness; no hemorrhages; slight bone tenderness. No hæmic murmur; heart sounds weak. Apex in normal position.

May 11th, 1896. No change in glandular system; tongue, lips and mucous surfaces very pale. Tinnitus very marked in left ear. Hearing distance, right ear, two feet; left, two inches; bone conduction reduced on left side. The eyes were examined by Dr. Frederick A. Smith, who kindly furnished the following report: Right eye, media clear, myopic 3 d.; general appearance of fundus, pale and misty; outline of disc clear except at upper margin from which there extended (for one and one-half disc diameters) upwards a gray patch of retinal œdema; veins very tortuous and enlarged to about twice their normal size; arteries slightly enlarged, no hemorrhages. Left eye, media clear, myopic 3 d.; veins and arteries more enlarged and tortuous than were those in right eye; œdema above disc as in right eye, except with the addition of three small hemorrhages.

October 6th, 1896. Much general emaciation, teeth all loose, gums spongy but do not bleed unless rubbed; patient suffers greatly from sensations of heat, perspires profusely; a decided fine tremor of hands exists; no muscular or nerve tenderness; all forms of sensation normal; reflexes normal. Hæmoglobin 60 per cent; white corpuscles, 400,000; reds, 3,000,000.

Differential count:

Small lymphocytes	779	77.9 per cent.
Large lymphocytes	178	17.8 per cent.
Polynuclear	42	4.2 per cent.
Eosinophiles	1	0.1 per cent.
Myelocytes	0	0
	1,000	100.0 per cent.

February 20th, 1897. Glands all on the increase; they move freely and are non-adherent to surrounding structures. Glands in right axilla when grouped are as large as a good-sized orange; those of left side as large as a hen's egg. Inguinal glands on right side produce an oblong swelling eleven c. m. in length and five in width. All superficial glands of body enlarged. Heart's apex in normal location, sounds very weak, no hæmic murmur. Splenic dullness begins at seventh rib in axillary line and extends backward to posterior axillary line, downward and forward, to an inch below free border of ribs. Liver dullness begins at upper border of fifth rib and extends downward and forward to level of umbilicus. Its whole lower border is palpable. Urine contains abundant uric acid crystals; otherwise normal.

April 24th, 1897. Muscles of both the upper and lower extremities much wasted, intereossei nearly gone. Skin is fast losing its elasticity; there seems to be a general recession in size of all glands. Patient is drowsy and semi-stupid; has no control over sphincters; tongue dry, brown and fissured; temperature normal; teeth covered with sordes. Patellar reflexes absent. Blood not examined. Death.

Notes from the Autopsy Protocol

Death April 24th, 1897, at 5:30 P. M. Autopsy 21 Hours after Death

Anatomical Diagnosis, Lymphatic Leukaemia; hyperplastic cervical, axillary, supraclavicular, inguinal, bronchial, and mesenteric lymph nodes with considerable pigmentation of those of the axilla, groin and bronchi, swelling of the spleen, with much lymphoid tissue; hyperplasia, venous congestion of liver, with extensive lymphoid cell infiltration; lymphomata and cloudy swelling of both kidneys; coronary artery disease; lymphatic infiltration and emphysema of both lungs; chronic adhesive pleuritis on both sides.

Exterior. Body of a slightly built, extremely emaciated woman. *Post mortem* lividity in dependent parts. Surface of the body generally pale. Rigor mortis in both extremities. Pupils midwide and equal. Mucous membranes of lids and mouth pale. On either side of the neck extending from above the clavicles to angles of jaws are two irregular masses about the size of a fist and made up of bunches of lymph nodes. Similar tumor masses of the same size are present in the right axilla and both groins; that in the left axilla is scarcely more than one-half the size of the other swellings. A few enlarged lymph nodes are likewise present in the supraclavicular region on each side. The tonsils are not enlarged. Interossei of both hands markedly atrophied. Abdomen slightly distended. Subcutaneous fat practically absent. Thoracic and abdominal muscles atrophied and pale.

Nothing of note was observed in the peritoneum and pericardium, and the omentum and diaphragmatic attachments were normal. Apart from moderate thickening along the free edges of the mitral and aortic valves and some calcareous atheroma around the coronary artery orifices, the heart presented no further lesions worthy of attention in this connection. Both lungs were bound down by old fibrous adhesions to the chest wall and moderately emphysematous; the mucous membrane of the bronchi was congested and covered with a moderate amount of muco-pus. The spleen was adherent to the diaphragm by old fibrous bands and the organ itself was increased to fully three times its normal size; here and there a number of pin-head areas of fibrous capsular thickening were to be seen. The cut surface of the spleen was mottled in appearance, due to areas of chocolate red and gray intermixed. The Malpighian bodies were distinctly swollen. The liver merely showed venous congestion; the gall-bladder and common duct were normal. The kidneys, on the whole, showed very little gross change, nor did the ureter, bladder, uterus, vagina, pancreas, adrenals, aorta or brain. The intestine showed no evident naked eye swelling near the lymphatic apparatus.

The lymph nodes throughout—axillary, cervical, bronchial, supraclavicular, mesenteric, retroperitoneal and inguinal—were considerably swollen, sometimes an individual node reaching the size of a pigeon's egg. They were all softer than normal, the capsules were thin, and there were no evidences of peri-lymphadenitis. Some, especially those of the axilla, cervical, supraclavicular region and groin, were pigmented, the pigmentation being variable and shading from dark brown to black. In some the pigment appeared to be limited to the center; in others it was diffuse. The brain, cord, and peripheral nerves were preserved intact.

Microscopical Examination: *Heart.* The heart muscle presented almost a normal appearance. In a few places, however, the cells showed transverse fragmentation. There was an increase in the number of leucocytes in the blood vessels.

Lung. The pleura was irregularly thickened and fibrous. The alveoli were for the most part dilated. Many of the alveoli, particularly those in the neighborhood of the bronchi, contained an exudate which consisted of polynuclear leucocytes, desquamated epithelial cells, and a few red blood corpuscles. In some portions of the lung the alveoli were almost filled with red blood corpuscles. The bronchi contained an exudate similar to that described in the alveoli. There were a few places in the lung in which there was a diffuse, round-cell infiltration forming definite lymphoid nodules. Some of these occurred around branches of the pulmonary blood vessels, beneath the pleura, and around bronchi.

The Liver showed collections of lymphoid cells, for the most part in intimate association with the portal spaces. At times, however, there seemed to be no distinct relation of these areas with these structures. The nodules were made up entirely of small round lymphoid cells. The liver cells appeared swollen and granular, and the capillaries of the organ were plainly seen to contain an unusually large number of leucocytes of the mononuclear variety.

Spleen. There was a marked hyperplastic condition of the lymphoid elements, almost the whole organ being made up of masses of lymphoid cells; the connective tissue of the organ was not increased.

Both *kidneys* showed a very marked albuminous degeneration. There were a slight increase of the connective tissue of the organ in places and occasional areas of small round cells most conspicuous in the cortex. No casts were seen. The blood vessels evidently contained an excessive number of lymphocytes.

Lymph nodes. On the whole these presented the same appearance, whatever their origin. The enlargement was due to adventitious infiltration, and apparently not to an overgrowth of the autochthonous cells. In places small areas of degeneration could be seen; now and again karyokinetic figures were observed.

The *peripheral nerves* and *spinal cord* were submitted to a careful microscopic examination. They were hardened in Müller formal solution and alcohol and after sectioning from celloidin, were studied with the Marchi, Weigert and Nissl stains. The spinal cord showed distinct degeneration of that part of the postero-internal columns bordering on the postero-median septum. This degeneration was traceable from the mid-lumbar to the lower cervical region where it ceased to exist. In addition to this ascending degeneration the cord in general showed the changes characteristic of senility. There was marked pigmentation of the cells of the anterior horns, dilated pericellular and perivascular spaces; multiplication of the capillaries, especially throughout the gray matter; many of the larger vessels showed distinct thickening of their walls. The central canal was obliterated. The neuroglia was everywhere increased; this was especially noticeable with the sub-pia neuroglia layer and the various septa extending into the cord. The only cellular changes were the marked pigmentation with an occasional excentrically placed nucleus. The peripheral nerves were found normal.

Scientific Review

DIPHTHERIA ANTITOXIN: A REVIEW OF SOME OF THE RECENT LITERATURE.

The literature referring to the use of diphtheria antitoxin is continually increasing. It has already assumed very large proportions. No attempt has been made to cover the entire field. Only articles readily accessible, and especially those written within the last two or three years, have been considered, though references are made to some of the earlier articles.

Northrup and Bovaird give abstracts from the literature of '96, '97 and '98 in their article on diphtheria in *Sajou's Annual.*[1]

Statistical. Before the introduction of antitoxin the death rate of diphtheria varied from thirty to fifty per cent.[2] In Boston, during the fifteen years previous to 1894, it averaged thirty per cent., and during the last five years of this period 45.3 per cent.[3] In Chicago, during the five years previous to October, 1895, the diphtheria death rate averaged thirty-five per cent.[4] In *Vienna,* in the children's hospitals where 10,000 cases were treated in the eight years previous to 1894, the death rate was each year over forty per cent.[5] In Paris, Berlin and New York the death rate was correspondingly high.[6] The occasional occurrence of a mild epidemic in any locality, as in Michigan in 1879,[7] did not appreciably lessen the dread of the disease. Since the introduction of antitoxin there has been a marked reduction of the death rate. The following table, which includes over 25,000 cases receiving serum treatment, shows a mortality of thirteen per cent.

Table showing death rate of 26,127 cases of diphtheria receiving antitoxin:

SOURCE OF REPORT.	NUMBER OF CASES.	DEATHS.	%
New York City Health Department[8]	8,386	913	10.8
Chicago Health Department[4]	5,727	486	8.4
Boston City Hospital[3]	2,093	281	13.4
Vienna Children's Hospitals[5]	7,826	1,401	17.9
Hôpital Trousseau, France[9]	1,778	279	15.7
Brisbane, Australia[10]	317	40	12.6
	26,127	3,400	13.0

This table includes many cases which were moribund when treatment was begun. In a series from which such cases are excluded the death rate is still lower, 7.8 per cent.

SOURCE OF REPORT.	NUMBER OF CASES.	DEATHS.	%
Boston City Hospital[8]	1,893	171	9
N. Y. City Health Department	7,001	528	7
	8,894	699	7.8

These results are similar to those obtained in a series of 75,000 cases tabulated by Robin,[11] and confirm earlier reports compiled by municipal officers and committees of various medical organizations.[1,8,11] It is apparent that there has been a permanent decrease in the mortality of diphtheria, the beginning of the improvement being synchronous with the introduction of antitoxin.

It is said that the inclusion of many mild cases diagnosed by culture methods vitiates comparison with results in the past,[12, 13] but these same methods exclude many cases that would otherwise be diagnosed as diphtheria.[11] It is, however, true that a larger number of cases are recognized earlier in their course and sent to the hospitals earlier than formerly.[12] If a comparison is made between the mortality rates of cases of equal severity, occurring before and after the introduction of antitoxin, there is found to be a marked reduction of the death rate among the latter. Cases of diphtheria requiring operation, intubation or tracheotomy, may be considered severe cases. Intubation was in general use before 1894. Siegert's figures show that in cases requiring operation in the Vienna children's hospitals, from 1886-1895 the mortality was in no year below fifty-three per cent. Since that time there has been a progressive decrease, the rate being 44.9 per cent in 1896 and reaching twenty-nine per cent in 1900.[5] In the municipal hospitals of Mühlhausen, Germany,[13] there was a reduction of the mortality of cases requiring operation from 67.5 per cent. in 1892 to thirty-seven per cent. in 1900. Similar conditions have been reported in other places and earlier statistics have been confirmed.[1,14,15]

In certain cities a greater number of children are said to have died since the introduction of antitoxin than before.[5,16] The use of antitoxin does not necessarily prevent the spread of the disease unless prophylactic injections are extensively used. In London antitoxin for a time was not generally employed by the profession at large, but in hospitals, as shown by the report of the Metropolitan Asylum Boards, covering 3,000 cases, in the treatment of which it was employed there has been a marked decrease in the death rate.[6] In these cities the *relative* mortality has diminished at a rate unheard of before.[5]

Administration and Dosage. Recent writers are a unit in recommending very early administration immediately after the diagnosis is made on the ground that antitoxin prevents rather than repairs injury.[17, 22] It is considered wasting precious time to wait for the confirmation of the diagnosis by the bacteriological report.[2, 18] The good results of early treatment are shown in the report of the Chicago Health Department.[4] In cases injected the first day of the disease the mortality was 0.4%, on the second day 1.5%.

Larger doses are used than ever. The initial dose now usually recommended is 2,000 units,[18, 17, 20, 21, 22, 23] 3,000 to 4,000 units in severe cases, repeated in 12 hours if necessary; in some cases as much as 16,000 units are given in 24 hours.[21] It is not possible to give an overdose according to Pane.[20] Park recommends that not over 3,000 units be given to a child under 1 year of age.[22] Musser recommends small doses frequently repeated.[24] In some cases operative interference may be averted by the administration of an emetic. Stenosis as a result is overcome for a few hours until the antitoxin has had time to exert an influence.[18]

The treatment of severe cases with saline infusions diluting the toxin and helping excretion by diuresis is recommended.[25]

For some years there have been occasional reports of the administration of antitoxin by the mouth, claiming favorable results.[1] Porteous[26] and M'Donnell[27] in recent communications add to the list of cases so treated. Park's results[1] were negative and Paton[28] thinks that antitoxin given in this way is not as efficient in diphtheria as by injection.

Carrier[29] has studied the effect of the gastric and intestinal secretions on Tetanus Antitoxin and Antirenin, he concludes that ptyalin, the gastric secretion and bile have little effect on them, while pancreatine, the intestinal secretions, and bacteria modify and destroy them. In St. Louis the development of tetanus is said to have been prevented in 15 cases by the administration of Tetanus Antitoxin by the mouth.[30]

Prophylactic Injections. Billings[31] advocates the wider use of antitoxin for immunizing purposes and claims it is the most efficient of four measures to prevent the spread of diphtheria, namely: Cure, isolation, disinfection, immunization. Out of 3,109 cases immunized, only 9 contracted the disease and these in in a mild form. He advocates 300-500 units as an immunizing dose. Biggs[6] reports over 5,000 persons immunized in about 2,000 families with 4 subsequent deaths from diphtheria.

Jump[32] studying the literature on the subject concludes that the duration of the immunity is about three weeks; he reviews the experimental work of Behring, Pansini and others. At the Charité Hospital, Berlin,[6] injections were made every three weeks and no child contracted the disease from 1896-1899. Injections were stopped for a short period, three or four weeks, and 24 children were attacked by diphtheria.

Antitoxin Sequelae. In Freyburger's[33] series of 310 cases forty-seven presented serum exanthems, about fifteen per cent. Of Percy Blake's[34] thirty-five cases receiving immunizing injections of about 300 units, two developed rashes. Richardiere[9] notes 198 eruptions in 1778 cases, about eleven per cent.; Stanley[35] 112 in 500 cases, about twenty-two per cent. The type of the eruption in more than half of Stanley's cases was urticarial. Others in the same series, presented urticarial, scarlatiniform or morbilliform rashes. The day of onset varied from the fourth to the twenty-ninth after the injection. No serious effects were noted. There appears to be no constant relation between the quantity of antitoxin injected and the frequency of the occurrence of eruptions[35] in spite of the quite general impression that they are more rare when concentrated serums are used.[5,6,20] Even precipitated antitoxin globulins are said to possess the property of producing rashes.[36] They have occurred in cases where antitoxin has been administered by mouth.[28] It is probable that this property is peculiar to certain lots or samples of serum from individual horses[14,33] and the only way to avoid this and other complications is to discard those lots of serum which have been found to produce them even though satisfactory as regards antitoxic strength.[14,22]

Joint pains were found in four of Marsden's 105[25] cases and in one of Percy Blake's[34] 35. In Stanley's 500 cases no arthalgias occurred.[35] Other reporters refer to them as of common occurrence.

Gland swellings coming on after the disappearance of primary symptoms of diphtheria in cases that have been treated with antitoxin have been studied by Freyburger.[33]. The following facts suggest to him an ætiological relationship between the serum and the gland conditions. 1. Frequent simultaneous presence of serum exanthems and gland swellings. 2. Frequent simultaneous presence of gland swellings in different children treated with the same sample of serum. He reviews the literature on the subject.

Antitoxin and Post-Diphtheric Paralysis. The report of the committee on antitoxin of the Clinical Society of London[23] mentions post-diphtheric paralysis as occurring in 21.7 per cent. of cases receiving 5,000 units and in 27.3 per cent. of cases receiving over 1,000 units. An apparent increase in the number of cases of paralysis may be due to the fact that more cases survive to have it under the antitoxin treatment.[37] Ransom[38] found in experiments upon pigs that paralysis might be expected with certainty after intoxication with not less than one-fourth the minimal fatal dose. Below one-eighth there was no paralysis. He thinks that antitoxin by preventing a fatal termination adds to the number of cases with post-diphtheric paralysis. The percentage of laryngeal stenoses requiring operation has been greatly reduced.[5] Heart conditions do not appear to be aggravated by the use of antitoxin.[3, 35]

Antitoxin and Albuminuria. In 501 of Burrows'[3] 1,962 cases, albumin was present in the urine. In no case was the amount more than one-fourth per cent. Marsden,[23] studying his series of 105 cases, thinks that antitoxin may have an irritant effect upon the kidneys, but this is not the rule and in any event is temporary.

Antitoxin Globulins. Hiss and Atkinson[39] find the antitoxic property of blood serum from inoculated horses is present in the globulins obtained by precipitation with magnesium sulphate. The amount of the antitoxic substance corresponds in full, as nearly as can be determined by the use of the test Guinea pigs to the full protective power of the serum from which it is derived. The advantages of the probable use in the future of precipitated globulins instead of the entire serum are obvious.

The St. Louis Affair. Report of Commission of Investigation[40] showed that antitoxin from the city laboratory dated September 30, 1901, and a part of that dated August 24, 1901, was the cause of the recent deaths from tetanus. The antitoxin was sterile, but contained the tetanus toxin. The finding of the court appointed by the St. Louis Board of Health to fix the responsibility for thirteen deaths from tetanus is as follows:[41]

1. The Diphtheria Antitoxin heretofore issued by the city was prepared, bottled and distributed by and under the supervision of Dr. Amand Ravold, who was employed by the health commissioner with the approval of the Board of Health in 1894 as consulting bacteriologist and to have charge of the preparation and distribution of Diphtheria Antitoxin, and that he was responsible for the quality of the material so prepared and distributed.
2. A horse kept by the city under the supervision of Dr. Ravold, as a producer of antitoxin was bled by him on September 29, 1901, and on October 2nd was found to have Tetanus and was killed.
3. From Dr. Ravold's testimony the poisonous character of the serum from this bleeding of September 29th was known to him, but he failed to cause the serum to be destroyed.
4. That owing to this inexcusable negligence the poisonous serum was in part bottled and issued to physicians between October 10th and October 23rd with deplorable results.

New Uses for Diphtheria Antitoxin. Talamon[42] has reported 100 cases of Lobar Pneumonia treated by injections of Diphtheria Antitoxin with a mortality of only 14 per cent.

Paton[28] during the last four years has given 8,000,000 units of Diphtheria Antitoxin by the mouth in treating various forms of sepsis. He considers it a specific in staphylococcus and streptococcus infections when administered in this way.[22] It is said that Diphtheria Antitoxin acts only against the Diphtheria Toxin and, therefore, as good results are not to be expected in cases of mixed infection as in pure diphtheria. On the other hand satisfactory results have been obtained in mixed infections. Almost all of Richardiere's[9] cultures showed streptococci.

Pharmacopeial Recognition. The Convention of 1900 on revision of the Pharmacopeia[43] agrees that standardization of tests for Diphtheria Antitoxin is at present impossible.

ARTHUR T. LAIRD.

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Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, MAY, 1902

Deaths

	1901	1902		1901	1902
Consumption	26	24	Pneumonia	4	19
Typhoid fever	2	2	Broncho-Pneumonia	3	2
Scarlet fever	1	0	Apoplexy	9	8
Smallpox	0	4	Bright's disease	15	12
Whooping cough	2	0	Cancer	12	9
La Grippe	2	0	Accidents and violence	14	13
Diphtheria	1	5	Seventy years and over	13	20
Measles	2	1			

Total number of deaths for May, 1902, 166; for May, 1901, 136. Death rate this year for May, 18.78; last year 15.84. Death rate this year less non residents, 17.76.

DEATHS IN INSTITUTIONS

	1901	1902
Albany City Hospital	14	14
Albany Orphan Asylum	1	1
County House	3	0
Convent of Lady of Angels	0	3
Homeopathic	5	2
Sacred Heart Convent	1	1
St. Francis De Sales Orphan Asylum	0	2
St. Margaret's House	1	0
St. Vincent's Female Orphan Asylum	1	1
St. Vincent's Male Orphan Asylum	0	1
Smallpox Hospital	0	4
Public Places	3	0

Births.................... 121 *Marriages*................ 41

WORK OF HEALTH PHYSICIANS

Total number of new assignments during the month	50
Total number of calls made	355

BENDER LABORATORY REPORT ON DIPHTHERIA TESTS

Initial positive.	Initial negative.	Release positive	Release negative.
22	24	23	24

Total number of cultures.................................. 93

INSPECTIONS

During the month there were 95 sanitary inspections and 25 re-inspections. Thirty-five nuisances were abated during the month, and fifty-three notices were served.

Among the plumbing inspections there were 209 on old buildings and 129 on new buildings. Sixty-four iron drains were laid, 64 street connections made, 35 tile drains laid, 38 cesspools, 47 wash basins, 63 sinks and a large number of miscellaneous inspections. One hundred and sixty-seven permits were issued, of which 113 were for plumbing and 54 for building purposes. Forty-four plans were submitted; 8 for old buildings and 36 for new buildings. There was one violation of the plumbing laws.

CONTAGIOUS DISEASES REPORTED

Typhoid Fever	7
Scarlet Fever	10
Diphtheria and Croup	23
Chicken Pox	22
Measles	29
Whooping-cough	2
Consumption	1

Number of houses fumigated..... 55 No. of rooms fumigated.... 158.

Number of days quarantined for diphtheria:

Longest........ 4 Shortest........ 7 Average........ 24½

Number of days quarantined for scarlet fever:

Longest....... 117 Shortest....... 10 Average....... 39

Medical News

Edited by H. Judson Lipes, M. D.

ALBANY HOSPITAL; A NEW PAVILION FOR THE TREATMENT OF CONTAGIOUS DISEASES.—The common council passed the ordinance presented by Alderman Barends June 2, 1902, appropriating $40,000 for a pavilion to be erected on the grounds of the Albany Hospital for the reception and care of patients who are ill with contagious diseases. The title is to remain in the city and the control is vested in the board of governors who agree to receive and care for all public patients sent there on certificate of the commissioner of charities and the health officer. The latter official has authority to inspect the pavilion at all times. A communication was received from Mayor Gaus transmitting a letter from Health Officer Craig in favor of the project and also from Dr. Henry Hun, Hon. William L. Learned and Dr. Samuel B. Ward, the committee of the hospital governors in relation to the subject.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—The following communication has been sent out by the committee appointed by the Medical Society for the investigation of the milk supply of the City of Albany:

To the Physicians, Dairymen and Milk Dealers of Albany County:

At the last meeting of the Medical Society of the County of Albany, a committee was appointed to inquire into the milk supply of this city. This action by the Society was taken on account of the importance, to physicians, of knowing the purity and quality of the milk and cream used in the feeding of infants and invalids.

The committee feels that the milk dealers and dairymen in this locality are equally with themselves interested in this question and earnestly desires their co-operation and advice. Most dairymen and dealers would improve their methods if the practical importance of so doing was pointed out and they were told where and how to make such improvements. For this purpose, the committee has arranged with Mr. J. Moldenhawer, of New York City, to address a meeting of persons interested in this question. This meeting will be held on Thursday afternoon, May 29th, at four o'clock, in Alumni Hall, Albany Medical College, corner of Eagle and Jay Streets.

Mr. Moldenhawer has had a large practical experience in dairy matters and especially in the production of sanitary milk.

At this meeting the further work of the committee will be considered and it is earnestly hoped that every physician, milk dealer and milk consumer interested in the betterment of our milk supply will attend.

JAMES P. BOYD, M. D., *Chairman.*
GEORGE BLUMER, M. D.
HENRY L. K. SHAW, M. D.

This meeting was well attended by the milk dealers of this city, but there were few representatives of the Medical Society present.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR: STATISTICS FOR MAY, 1902.—Number of new cases reported to the Guild, 50. *Classification of cases:* Dispensary patients, 3; district cases reported by health physicians, 4; charity cases reported by other physicians, 25; total number of charity cases, 32; moderate income patients, 18. *Classification of diseases:* Medical, 14; surgical, 10; gynecological, 26. This general classification includes 3 dental cases and 12 maternity cases, 10 in the general work of the Guild and 2 in the Special Obstetrical Department. One contagious disease in the surgical list. Removal to hospitals, 3; died, 2. *Visits of Guild Nurses:* Number of visits with nursing treatment, 653; for professional supervision of convalescents, 289; total for May, 942. Cases were reported to the Guild by the city physician, by two of the health physicians and by nineteen other physicians. Dentists 3.

Special Obstetrical Department: April and May, 1902.—Physicians in charge, 2; medical students in attendance, 6; graduate-nurses, 4; patients, 4. Number of visits by head obstetrician, 14; by the assistant obstetrician, 8; by the medical students, 42; by the guild nurses, 47. Total number of visits, 111; in April, 47; in May, 64. One case under treatment; 4 patients on waiting list.

AMERICAN GYNECOLOGY; A NEW JOURNAL.—*"American Gynecology"* is to be the title of a new journal which is announced to begin publication in July. It will be devoted to Gynecology, Abdominal Surgery and Obstetrics.

The journal will be owned and controlled by a stock company consisting of members of the profession interested in its special field. It will be conducted under the editorial management of J. Wesley Bovee, M. D., of Washington, D. C.; Charles Jewett, M. D., of New York; Charles P. Noble, M. D., of Philadelphia; Reuben Peterson, M. D., of Ann Arbor, Mich., and J. Whitridge Williams, M. D., of Baltimore. Mr. E. W. Reynolds will be the business manager. The office of publication will be No. 1 Madison Avenue, New York, N. Y. The list of editors of this new journal contains the names of those who have been eminently successful in this department and assures the success of this undertaking.

THE OMAHA MEDICAL COLLEGE.—By an agreement entered into between the trustees of the Omaha Medical College and the regents of the University of Nebraska, the college becomes the Medical Department of the University. It is certain that the moral effect of the union will make itself felt in elevating and strengthening an already high tone of scholarship at this college.

PERSONAL—MARRIED: MCKOWN—BOWEN.—On Tuesday, June 17, 1902, Dr. FRANCIS J. MCKOWN (A. M. C. '97), and Miss BESSIE MORGAN, at Utica, N. Y. Dr. and Mrs. McKown will reside at Carmel, N. Y.

—ADT—MOORE.—On Tuesday, June 3, 1902, in New York City, Dr. LEO FRANK ADT, of Troy (A. M. C. '92), and Miss EDITH MOORE. Dr. and Mrs. Adt will reside at No. 54 Fourth Street, Troy, N. Y., after a trip through the South.

—TRAVELL—GREEN—At Albany, N. Y., June 26, 1902, Dr. CHARLES HOWARD TRAVELL (A. M. C. '94), and ANNA WESTFALL GREEN, of Albany.

—BORN.—LEWI.—June 8, 1902, a son to Dr. and Mrs. WILLIAM G. LEWI, of Lark Street, Albany.

—Dr. EDWARD J. PARISH (A. M. C. '96), has recently located at 326 Lexington Avenue, New York City, where he will make a specialty of orthopedic sergery. Dr. Parish has had a most satisfactory opportunity for study in this special department.

—Dr. F. A. HENNESSY (A. M. C. '96), who was recently the assistant surgeon in the Metropolitan Throat and Nose Hospital in New York City, is now located at Westport, Essex County, N. Y.

—Dr. ARTHUR E. FALKENBURY (A. M. C. '96), is located at Whitehall, N. Y.

—Dr. G. ALDER BLUMER, formerly Adjunct Professor of Insanity in the Albany Medical College, has recently been elected President of the American Medico-Psychological Association.

—Dr. MICHAEL J. THORNTON (A. M. C. 1901), has been appointed medical interne at the Craig Colony, Sonyea, N. Y.

—Dr. L. F. ADT (A. M. C. '92), of Troy, N. Y., has announced office hours in Albany at 48 Eagle Street, from 3 to 5 P. M.

—Dr. MARTIN J. DWYER (A. M. C. '83), has removed from Albany to 136 West 49th street, New York City.

Book Reviews

Syphilis—A Symposium. E. B. Treat & Co., 1902.

In a little volume of 120 pages are gathered papers by seventeen well known writers, Bulkley, Duhring, Fournier, Keyes, Gottheit, are some of them—syphilographers of prominence many of them, on various topics connected with the subject, a subject which is one of the largest, the most universal in medicine. Each is a chapter on some one of its multitudinous aspects; the etiology, the clinical characteristics of the initial lesion, of syphilis of different organs, its management. A valuable chapter is on how best to diagnosticate communicative syphilis in a wet nurse, by J. D. Thomas, of the Western Pennslyvania Medical College. While a woman in the secondary stage of the disease, he says, would almost infallibly infect a healthy child, a tertiary syphilitic cannot, and there are enumerated the symptoms by which the presence of the disease may be recognized during the first two months, from then to the sixth month, and after the sixth month, which best require careful analysis, all summed together in a very few pages.

Somewhat cognate is the topic of Unrecognized Syphilis in General Practice, a well digested chapter by L. Duncan Bulkley; and, likewise, William S. Gottheil has some pages that are very suggestive on the Unrecognized Chancre. Syphilis of the Stomach, of which most authors on the diseases of the stomach make no mention, receives an important contribution from Boardman Reed, of Philadelphia. A series of half a dozen questions covering the interesting points of doubt in regard to syphilis of a practical sort, which were submitted to several men who could speak authoritatively, have their respective answers.

The papers were originally contributed to the *International Medical Magazine,* and this volume is a collation of them under one cover.

F. C. C.

Current Medical Literature

MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

Observations on the Frequency and Diagnosis of a Flint Murmur in Aortic Insufficiency.

WILLIAM SYDNEY THAYER. *American Journal of Medical Sciences, November, 1901.*

Since May, 1899, seventy-four cases of aortic insufficiency have come to necropsy at the Johns Hopkins hospital. In forty-five or 60.8 per cent. there was heard a murmur exactly similar to that characteristic of mitral stenosis. In twelve or 26 per cent. there existed a mitral stenosis as well as aortic insufficiency. In thirty-three or 73.3 per cent. the mitral valve was normal. In all the twelve cases, where there was a mitral stenosis, the lesion was an endocarditis. In the remaining thirty-three cases, without mitral stenosis, the endocardial changes were part of a general arterio-sclerosis in sixteen. In seventeen there was acute or chronic endocarditis. In four of these cases was a general arterio-sclerosis as well. Of the thirty-three cases, without mitral stenosis but with the murmur, the valve was normal in seventeen. In sixteen, greater or less change was present. Of the seventeen cases, where the mitral valve was normal in twelve or 70.5 per cent., changes in the aortic valve were secondary to a general arterio-sclerosis and atheroma of the aorta. In five there was chronic valvular endocarditis. With regard to the frequency of mitral presystolic murmur in aortic insufficiency uncomplicated with mitral stenosis, out of fifty-eight cases such a murmur was heard in thirty-three or 56.8 per cent.

It also appears to be clear that disease of the mitral valve, other than sclerosis, play no essential part in the production of the presystolic murmur. The majority of the cases, then, of aortic insufficiency have shown, on careful examination, a Flint murmur,—that is, a presystolic or late diastolic rumbling or echoing murmur heard at the apex,—a murmur clearly independent of organic mitral stenosis.

With regard to the differential diagnostic signs, *intra vitam* cases of aortic insufficiency with Flint murmur and those complicated with mitral stenosis, the following should be borne in mind: In twenty-eight cases of aortic insufficiency uncomplicated with mitral stenosis, in which a Flint murmur was heard, a typical Corrigan pulse was present in fourteen or 50 per cent. In the remaining cases the pulse was not small, but somewhat collapsing. In thirty-three cases a palpable thrill was observed in fourteen or 42.4 per cent. A characteristic tapping systolic shock was noted in five or 15.1 per cent. of the cases. In thirty-three cases the snappy valvular first sound was observed in ten or 30.3 per cent. The character of the presystolic murmur is essentially the same in both conditions with the exception that a Flint murmur is never so rasping and intense as are the marked murmurs of true mitral stenosis. The presystolic thrill is also less frequent and less intense. In but a very small proportion of the cases of aortic insufficiency with the Flint murmur does the apex impulse have the tapping character so significant of mitral stenosis. The pulse in aortic insufficiency complicated with true mitral stenosis was recorded as small in over a quarter of the cases. In uncomplicated aortic insufficiency with Flint murmur the pulse is always characteristically large and collapsing.

The diagnosis of Flint murmur is fairly safe when a rumbling or echoing presystolic murmur in the region of the apex is present in aortic insufficiency occurring in an individual with well-marked general arterio-sclerosis, especially where there is no history of any acute malady ordinarily associated with the development of endocarditis, and in the absence of a marked systolic shock or snapping first sound. If, on the other hand, the patient be an individual with soft peripheral arteries and a history of rheumatism or chorea, the probability of concomitant affection of the mitral valve is great.

The following case illustrates a rather unusual train of symptoms: D. B., colored, laborer, forty-five, admitted to hospital July 22, 1896, complaining of shortness of breath and swelling of the legs. Family and personal history negative. Had shortness of breath several months and swelling of abdomen four weeks. *Physical examination.* Well nourished, arcus senilis marked, arteries thickened. Cardiac impulses in mammillary line in fifth interspace. No marked systolic shock, faint presystolic thrill. At apex is slight presystolic murmur ending in a snappy first sound followed by soft systolic murmur. Second sound not present at apex. Diastolic murmur is heard over aortic interspace. Pulse collapsing. Improved under treatment, and left hospital August 31st. Professor Osler noted September 21st, "At the apex a loud systolic shock is preceded by a somewhat rough murmur in diastole, which does not run quite up to the beat." Again, September 24th, "At the sixth intercostal space a rough systolic murmur is well heard and shock of first well felt. No thrill." October 30, 1898, the patient died. Repeated notes were made by Professor Osler and Drs. McCrae and Futcher and the writer. The valvular snapping character of the first sound was constantly referred to. The thrill was of moderate intensity and was often absent. The presystolic murmur also varied greatly in intensity. Owing to the nature of the systolic shock and the snapping character of the first sound, a diagnosis of true mitral stenosis in association with aortic insufficiency was universally concurred in. The necropsy, however, showed general arterio-sclerosis with moderate thickening and retraction of the aortic valves. The mitral curtains were absolutely normal.

A Case of Werlhof's Disease. (*Ein Fall von Werlhof'scher Krankheit.*) W. N. Nikitin. *St. Petersburger medicinische Wochenschrift, No. 34, August 25, 1901.*

The patient was a married woman, aged twenty-three, who presented a tumefaction of the nasal passages, which prevented nasal breathing, and also enlarged cervical glands. Two days later an erosion of the left tonsil was noted, with a grayish secretion, composed of pus cells, streptococci and staphylococci. From this tonsil there was a constant oozing of blood. There was a slight rise in temperature. The hæmorrhage persisted in spite of treatment, and at the end of a week there was a generalized petechial eruption, particularly noticeable upon the extremities. Then followed large subcutaneous extravasations, without articular pains, and in their centres hard nodules. Small ecchymoses appeared upon the soft palate and the sclera. There was no epistaxis, but considerable hæmorrhage from the gums. Vomiting of blood-stained material ensued, the appetite failed, great thirst followed, and the patient died after a total duration of the disease of 104 days. It was noticeable that a subjective sensation of discomfort did not exist until three or four days before the fatal issue. Throughout the illness there was no involvement of the urine, and the blood examination, except for apparent thinness and possible increase in plaques, revealed no abnormalities.

The writer refers to the modern conception of this disease, which was first described by Werlhof in 1775, as an infection. Letzerich especially isolated an organism which reproduced the condition in inoculated animals. Eichhorst assumes that there is a toxic influence, or an auto-intoxication, resulting in injury to the walls of the blood vessels. In the author's case there was every indication of an acute infection, which possibly gained entrance through the nasal passages. The febrile and constitutional symptoms which followed the comparatively slight local disease were all out of proportion to its severity, and were due to some general condition. Finally, certain authors, as Kissel, have described cases, which have followed articular rheumatism, a most pronounced infectious disease.

Concerning a Special Form of Angina Pectoris—Rheumatic Pseudostenocardia. (Ueber eine besondere Form der Stenocardie.)

G. v. Voss. *Deutsche medicinische Wochenschrift, October 3, 1901.*

The author gives the clinical history of two cases, both of which were good examples of pseudostenocardia. Acute rheumatism of the deep muscles of the back was the predominating factor in each.

The first patient, a man, fifty-five years old, had had an attack of stenocardia, with dyspnœa, tachycardia, etc., twenty years before the attack for which he was treated by the writer. This attack came on suddenly after a sudden stooping movement, with severe sticking pains in the back between the shoulders, extending to the region of the heart, some dyspnœa, slight tachycardia, and fear of impending death. The back musculature, particularly the deep muscles between the shoulder blades, was very sensitive to pressure. This sensitiveness was also present on movement of the legs or arms. The patient suffered from a general rheumatic diathesis, which manifested itself in the so-called "flying" rheumatic attacks. No history of lues.

In the second case, that of a young woman, aged twenty-five, the attack came on suddenly during the night, with severe pain in the chest, dyspnœa and tachycardia. The pulse was small and rapid, but regular. The muscles of the back were very sensitive to pressure or when attempted to move. Heart remedies did not alleviate the patient's suffering, but hard rubbing of the muscles of the back finally caused some relief. The attack lasted about an hour and a half.

In both patients the attacks were typical of a fairly mild angina pectoris, with the exception that in neither case did the pain shoot down the left arm. As support of his view of the cases, the author adds that the first patient stated that adduction of the arms, which goes with abduction of the shoulder blades, caused the most pain. Then, too, in this patient there was a general rheumatic diathesis, because he had at different times rheumatic pains in almost all the groups of muscles.

In conclusion the writer states that he has attempted to separate one group from the symptom complex of angina pectoris, to show that such symptoms do not always necessarily indicate a serious disease of the heart or blood vessels.

OPHTHALMOLOGY

Edited by C. M. Culver, M. D.

Amblyopia Due to Excessive Tea-Drinking.

R. Wallace Henry. *London Ophthalmic Review, December, 1900.*

The authors of modern text-books on ophthalmology admit that the toxic effect of the overuse of tea may manifest itself as an eye-effection. Casey Wood, of Chicago, believes that asthenopia and amblyopia may both be due to it; de Schweinitz, of Philadelphia, includes tea among the many articles whose undue consumption may result in toxic amblyopia. Berry, of Edinburgh, while not having met with a case in which other factors could, with certainty, be excluded, admits the possibility of toxic amblyopia from tea. Wolfe, of Glasgow, in a paper before the British Medical Association, ascribed a degenerative affection of the vitreous to the tea habit; several speakers, in discussing the paper, doubted if tea-drinking were the only cause. Kenneth Campbell, in a paper read at Moscow in 1897, described a case of toxic amblyopia due to tea, the chief features being as follows: The patient, a man, aged forty-six, had noticed for six months that his sight was failing; at the end of this period his visual acuity amounted to but five per cent. of the normal, and was not susceptible of improvement by glasses. This was the case with each eye. The dioptic media were clear, the fundi appeared healthy, the fields for white were normal and there was a "partial central scotoma for red." The patient's general health was good; he smoked three pipesful of shag a day and drank a single glass of beer daily. Acting on the advice of Dr. Campbell, he stopped smoking and took nux vomica. At the end of two months his vision had not improved. Further inquiry then elicited the fact that he drank twelve cupsful of strong tea *per diem*. The use of tea was forbidden and that of tobacco and beer, in the quantities formerly used, resumed. Thereafter the improvement of his vision was steady, till, four months later, it was about seventy per cent. of the normal. Dr. Henry, the author of the article now being abstracted, reports a case of his own, which, in some respects, resembles the one just outlined. It was that of a man, aged fifty-seven, who worked on shoes, who complained that, for some months, he had been troubled by a dazzling mist before his eyes, which came on as the day got brighter, especially troubling him at his work and disappearing towards the afternoon. Although he said that his vision had formerly been good for all distances, when he became Dr. Henry's patient he declared that he could not see clearly when going about, nor could he see near objects, even with glasses, long at a time, when the light was dull, nor could he see at all when the light was bright. On the 28th of April, 1900, the distance vision of each eye was nearly seventy-five per cent. of the normal, with the glass correcting its ametropia. The field for white, of each eye, was full, while there was a small, central scotoma for red. The paper reports the general health as having been normal and says in what respects, stating about a dozen. The patient never used tobacco in any form and drank only a pint of beer a day. Further catechizing revealed the fact that the patient drank very much strong tea. The use of tea was forbidden and, in view of the existence of some slight dyspepsia, bicarbonate of soda and nux vomica were prescribed. During the next month, while the patient said the dazzling had diminished, his vision was not improved. Six weeks after the first consultation, the patient's distance vision was as originally, while that for near objects was considerably better than it had been at first. The iodide ot potassium and nux vomica were then prescribed for him. Three weeks later the vision of each eye, with its proper correcting lens, had become normal and the dazzling was less than it had been. At the end of three more weeks all the patient's eye trouble had disappeared. The history of the case makes it pretty certain that it was one of toxic amblyopia, mild in type, and caused by the overuse of tea.

Report of the Official Oculist of the Belgian State Railway, to the International Pententiary Congress, at Brussels. (*Congrès pénitentiaire international de Bruxelles. Rapport présenté par M. le Dr. De Lantsheere, oculiste agréé du chemin de fer de l'Etat belge.*)
DE LANTSHEERE. *Presse Médicale Belge, September 16, 1900.*

This report concerns the technical education of children and minors in penal institutions. Although the physician may not be competent to select for children the pursuits for which education ought to prepare them, he ought at least to be permitted to point out some considerations of the correlation of the choice of a vocation and the physical constitution of the candidate. The author seeks, in this report, to consider only the visual ability of the children concerned. He first emphasizes the difference between professional aptitude and the aptitude for work. Then he lays stress on the importance of eye-sight and the desirability of it being as good as can be obtained. The defective vision of vast numbers of workmen prevents their doing the best work. The community's physical welfare is endangered by the existence of visual defects, many of which might be remedied. The author discusses this with reference to the army, railway, tramway and marine service. Many authorities are cited with reference to the desirability of promoting ocular or visual hygiene, and the well-known consequences of neglecting this are again reviewed. More than half the issue of the *Presse* is devoted to this report, whose conclusions are: 1. The authorities in penal institutions for children and minors should charge an ophthalmic surgeon to make annual, periodical examinations as to the visual faculties of the inmates. 2. That note should be kept, as a part of the record of each inmate, of the result of such examinations. 3. That these be taken into account when choice is made of the trade for each to follow, and: 4. The kind of vocation should conform to the physical ability of the one who is to undertake it.

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ALBANY MEDICAL ANNALS

Original Communications

ANEURISM OF THE THORACIC AORTA.*

FOURTEEN CASES WITH SEVEN AUTOPSIES.

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The only apology I can offer for introducing a subject so old, or about which so much has been written, is the rather unusual experience in private practice of having had under my personal observation, fifteen cases of thoracic aneurism, seven of which number came to autopsy.

I will briefly consider the subjective symptoms and will then take up seriatim the physical signs of this rather uncommon condition and refer to the seven cases with autopsy. Certain rare cases of thoracic aneurism exist, which are so located that none of the usual symptoms or physical signs occur to indicate their presence, hence they are absolutely latent and discoverable only at the post-mortem table. When a student, I made an examination of a patient for Doctor Bontecou at the Marshall Infirmary, who died suddenly without symptoms, having been in perfect health. We found the left pleural cavity full of blood due to rupture as an aneurism in the descending part of the thoracic aorta. In other cases in which the aneurism is small and deep-seated nothing but the most painstaking and careful physical exploration, together with the most detailed description of the history, will enable the clinician to feel reasonably sure that an intra-thoracic growth exists, aneurismal or mediastinal. While in a third, the great majority, the aneurism is so placed that it exerts pressure on contiguous tissues and those at a distance producing an array of symptoms and physical signs difficult of explanation only to the tyro.

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*Read before the Medical Society of the County of Albany, November 13, 1901, and the Medical Society of the County of Rensselaer, December 10, 1901.

Broadbent, owing to differences anatomically between the ascending and transverse portions of the aorta, aptly denominates aneurism of the former, aneurism of physical signs, and that of the latter, aneurism of symptoms. These differences are self-evident when we consider the superficial position, and the relations of the ascending aorta with the adjacent structures, it being quite movable and not closely attached to the surrounding tissues. Hence an aneurism of this portion of the aorta may attain a large size without compromising from pressure important structures, its presence being indicated by physical signs rather than symptoms, whereas the transverse portion of the arch of the aorta is more or less fixed because of its attachment to adjacent parts, and is in close proximity to the trachea, œsophagus, innominate veins, sympathetic and pneumogastric nerves; the left recurrent laryngeal nerve winding about it. Hence aneurism of this portion of the arch early creates pressure, thus causing numerous subjective symptoms long before physical signs are manifest.[1]

The subjective symptoms are due to constant or intermittent pressure and when correctly interpreted are of great diagnostic value. The most important of them are pain, cough and alteration of voice, dyspnœa, and dysphagia. Usually the first and most prominent symptom, although not always the most constantly complained of by the patient, is pain. Its character is variable. It is frequently intermittent and is dependent upon the structures involved by pressure. It may resemble an attack of true angina pectoris, especially if the aneurism arises from the sinuses of Valsalva or the ascending part of the arch, and thus involving the coronary arteries by pressure, interferes with the coronary circulation. The pain is often described as acute, stabbing or lancinating in character, shooting through or around one or both sides of the chest, neck, or down one or both arms to the finger tips, and is due either to irritation of the spinal nerve roots, the intercostal nerves, or the nerves of the cervical or brachial plexuses. Frequently the pain is more or less continuous, of a dull, gnawing or boring character, and is usually due to the erosion of bone, the sternum, ribs or vertebræ. Pain may occur in aneurism regardless of its position and is then due to pressure on the sensory nerves of the adjacent tissues, or of the sensory nerve filaments of the aorta. Of itself, pain possesses but little diagnostic value, but taken in connection with other symptoms and signs is of considerable value. In this connection I wish to introduce a statement of Professor W. T. Gairdner, which I have more than once verified: "That in these cases, iodide of potassium is not only, as a rule, well borne in large doses, but in conjunction with rest, exercises the most striking and sometimes the most immediate relief as regards pain. Ninety grains or more in twenty-four hours can sometimes be tolerated for months together, not only without iodism or any other ill results, but with the most clear conviction on the part of the patient that he owes his exemption from severe symptoms mainly to the remedy. It is not quite certain that such a result can occur only in aneurisms; but, so far as my observations extends it is in aneurismal cases chiefly, that so striking and so convincing a therapeutic success, as regards this single symptom, has been achieved."[2]

Cough and alteration of the voice are very striking and common symptoms of thoracic aneurism. The cough may be due to irritation from pressure on the trachea, bronchi or lung structure, or of the recurrent laryngeal nerves, while the alterations of the voice are commonly dependent on irritation or paralysis of the recurrent laryngeal nerves of one or both sides, more often the left. The cough due to implication of the recurrent laryngeal nerve is quite characteristic of aneurism, being paroxysmal, of a harsh, dry, clanging quality and often accompanied by laryngeal stridor. The cough from irritation due to pressure on the trachea, bronchi or lungs presents nothing characteristic save that it is occasionally attended by a copious expectoration, frequently blood-stained. If there is union of the sac to a bronchus with erosion of the latter, slight recurring hæmoptysis from a rent in the sac may result; such occurrences should immediately suggest the presence of an aneurism. Very copious and fatal hæmoptysis is not uncommon when a thin-walled sac perforates into a bronchus. Such was the cause of death of one of my patients. In regard to the voice the patient may be hoarse, unable to talk above a whisper, or completely aphonic, due to irritation or paralysis of the recurrent laryngeal nerve, as it winds from before backward around the aorta, near the junction of the transverse with the descending portion of the arch, *en route* to the larynx, where it supplies with motion all the laryngeal muscles, save the crico-thyroid.

Dyspnœa, a symptom common to so many respiratory and cardiac diseases, while very common in thoracic aneurism, is of no special diagnostic value. It may be due to direct pressure on the trachea, primary bronchus at root of lung, or may be due to pressure direct on lung tissue. Another frequent cause of dyspnœa is pressure on the recurrent laryngeal nerves, usually the left, when it is paroxysmal and accompanied by a brassy cough and stridor. It is this combination of dyspnœa, cough and stridor which is so characteristic of thoracic aneurism. Another peculiarity of the dyspnœa of aneurism is its intermittency, being rarely continuous, and it is often diminished or entirely relieved when the patient alters his position; this is probably due to variability of the blood pressure within the sac.

Dysphagia, though not a common symptom of aneurism, is often present when the sac involves the transverse or descending portion of the arch, and is due either to direct or indirect pressure on the œsophagus, fluids being more easily swallowed than solids. The only value this symptom has in a diagnostic way, is its intermittent character, as dysphagia is a symptom common to intrathoracic or œsophageal growths. In this connection it is needless to say that in the introduction of the œsophageal sound, one should always exclude the possibility of aneurism, else unexpected perforation of the sac may speedily excite a fatal issue.

Emaciation is not a prominent symptom in patients suffering with thoracic aneurism, but when present is most always due to prolonged suffering from severe pain. In certain rare cases, however, it has been ascribed to pressure on the thoracic duct. It is self-evident that if the lumen of the œsophagus is much narrowed from pressure of the sac, general emaciation will be present. Unilateral sweating with suffusion of the face a hard brawny swelling of the face and arms, with marked lividity, and without apparent local cause, should suggest the presence of an aneurism or new growth.

The peculiar spongy elastic fullness of the base of the neck first described by Walshe and aptly termed by Bramwell the collar of flesh, is also highly suggestive of thoracic aneurism. It was well marked in one of the cases herein reported.[8]

Physical exploration gives the most reliable data in regard to the diagnosis of thoracic aneurism. The physical signs are dependent upon the size and position of the sac, as well as the contiguous structures involved by pressure. Aneurism occurs most frequently at the junction of the ascending and transverse portion of the arch; next in frequency the transverse, and more rarely in the descending part, or at or just above the sinuses of Valsalva.[4]

Inspection often shows enlarged and tortuous veins on the anterior surface of the chest filling from above or below, depending on whether the sac is making pressure on the vena azygos, superior vena cava, or vena innominata. There may be inequality of the pupils, one being dilated, the other normal in size, or both may be minutely contracted; the pupillary symptoms are often accompanied by vaso-motor spasm or paresis resulting in pallor or flushing of the face on one or both sides. These irritative or paralytic symptoms are due to pressure on the superior thoracic or cervical sympathetic ganglia. A distinct expansile pulsation may be observed either in the episternal notch, in the left interscapular region, or to the right or left of the sternum, and synchronous with the heart's systole. One or the other side of the chest may pulsate, which is observed best when the patient holds his breath. This last form of pulsation, while not truly expansile, is suspicious but not diagnostic alone of aneurism, as the heart may lend its pulsation to a mediastinal tumor or to a collection of pus in the left pleural space. When the sac grows forward, blending with and eroding the ribs or sternum, a distinct tumor is seen, which, unless filled with layers of laminated fibrin, pulsates synchronously with the heart, and gives one the impression as if two hearts were beating in the chest at the same time. This expansile pulsation synchronous with the beats of the heart but distinctly separated from them is almost pathognomonic of aneurism. This symptom was first described by Stokes.[5] It is most often seen at the right edge of the sternum and is usually associated with bulging in the region of the manubrium, or to the left of the sternum, in the episternal notch, or in the left interscapular region. Sometimes the aneurism is placed just beneath the sternum, bulging it directly forward. An excellent way of detecting a slight pulsation is to inspect the chest while standing behind the patient looking over his shoulder, or when the patient is in the horizontal posture, having the eyes as near on a level with the chest as is possible. This method, first described by the late Austin Flint, who more than any other man in America, placed physical diagnosis on a scientific basis, has been of much service to me in detecting pulsations synchronous with, but independent of those of the heart.[6] An excellent way of showing a slight pulsation of the chest other than that of the heart is to make a flag of a piece of stiff paper and fasten it to the chest with a little collodion or mucilage, when a pulsation synchronous with, but distinct from the heart's beat will be observed. The patient should hold his breath during the observation.

Inspection may also show localized œdema of the face, chest, and arm together with enlarged dilated veins. Or it may show a patient with a weak, shuffling, spastic gait with inability to raise the feet well from the floor, with or without rigidity of the spine, the result of an aneurism of the descending thoracic aorta eroding the vertebræ and exerting pressure direct on the spinal cord and its membranes, thus creating a pressure myelitis.

Laryngoscopic examination frequently shows one or the other vocal cords in the median line and motionless, the result of abductor paralysis. The left vocal cord is the one most commonly involved, from pressure on the left recurrent laryngeal nerve.

The apex of the heart is often displaced downward and outward, rarely due to direct pressure from the aneurismal sac, but commonly due to hypertrophic dilatation of the left ventricle, the result of dilatation of the aortic ring, inducing relative insufficiency of the aortic valve. It may also be due to coincident valvular or renal disease or general arterio-sclerosis.

Palpation will in most cases, especially when a tumor is visible, give a distinct expansile pulsation synchronous with the systole of the heart. This is an indication of great diagnostic value in the diagnosis of thoracic aneurism. Occasionally there will be felt a systolic, more rarely a diastolic, thrill due to the passage in and out of the blood current over the roughened sac. At times when no external tumor is evident, by making deep pressure with one hand in front of the chest, the other behind, or by dipping the fingers deep down into the episternal notch, aneurysmal pulsation may be detected. With this last procedure one must be careful not to mistake a slightly dilated aortic arch for an aneurism. The carotid and radial arteries should always be felt, as there frequently exists irregularity in the pulse, the volume being less on one or the other side, or the pulse may be delayed, or it may be entirely absent; the latter symptom being due, according to Marie, to the aneurysmal sac acting as a reservoir, thus converting an intermittent into a continuous flow. These alterations in the pulse are due either to direct pressure on the arteria innominata, carotid, or sub-clavians, or the same named arteries may be sclerosed or involved in the sac, and hence distorted or contracted, or their lumen may be partially occluded by clots. Osler has reported an interesting case of large thoracic aneurism with obliteration of the pulse in the abdominal aorta and its branches, due, as he believes, to the sac acting as a reservoir, annihilating the ventricular systole, and converting the intermittent into a continuous stream.[7]

A collapsing pulse is not very rare and is usually due to free aortic regurgitation, owing to dilatation of the aortic ring with consequent relative insufficiency of the aortic valve. Under this heading may be mentioned two very important diagnostic signs indicative of deep-seated aneurisms which are rarely if ever present in intra-thoracic tumors. I refer to tracheal tugging and diastolic shock.[8]

Recalling to mind the anatomy of the part, it will be remembered that the transverse portion of the aortic arch in its course backward to the left and then downward, passes over the left primary bronchus close to its junction with the trachea. Hence, if this part of the arch be converted into an aneursymal dilatation, it will with each expansion of the sac, especially if the sac be adherent, exert pressure directly on the trachea or left primary bronchus. Advantage of this fact has been taken by Major Oliver, who, in the *Lancet* for 1891, first described the so-called tracheal tugging and gave the following directions for obtaining it. Place the patient in the erect position with his mouth closed and his chin elevated, then grasp the cricoid cartilage between the finger and thumb, making gentle upward traction. The pressure thus excited is transmitted to the trachea producing a distinct and forcible downward tugging with each systole of the heart. The late R. L. MacDonnell, of Montreal, claims that non-aneurismal tumors in this region are not accompanied by this sign, and that pressure on the trachea from whatever cause does not produce it.[9] Sewell, on the contrary, points out that a tracheal tug quite palpable in character, is in many cases associated with and dependent upon adhesions of the left pleura, and hence often found in chronic tuberculosis. Since my attention was directed to the above mentioned pathological conditions as a cause of tracheal tugging, I have examined a number of patients afflicted with thickened pleura or chronic lung tuberculosis chiefly of the fibroid type, without satisfying myself that the slight tug occasionally present is at all suggestive of the much more marked one so characteristic of thoracic aneurism.

Diastolic shock is due to the transmission through the chest or trachea of a distinct shock at the time of the closure of the aortic valve. Osler says by far the most reliable sign of thoracic aneurism is the diastolic shock so often to be felt and so often to be heard over the sac when it reaches the chest wall. Broadbent says the diastolic shock is the most absolutely pathognomonic sign of aneurysm.

Hall[10] directs the profession's attention to the tracheal diastolic shock in the diagnosis of aortic aneurism. This sign, he says, is, in brief, the transmission to the hand of the diastolic shock originating at the time of the closure of the aortic valve, through the aneurism, to the trachea, and manifested by a distinct, sharp impulse following the tracheal tug, at the some interval as that between the apex-beat and the closure of the aortic segments.[11]

Percussion. When the aneurism is deep-seated and not united to the chest wall at any point, percussion avails but little, but when in contact or in close proximity to the parietes of the chest, percussion shows localized dullness with marked resistance to the finger over the area corresponding to the common site of the aneurysmal tumor, either to right or left of the sternum, beneath that bone or in the inter-scapular region, and is, in connection with other signs, of diagnostic importance.

Auscultation. The heart sounds are often heard more accentuated over the position of the tumor, than at the apex or at the base of the heart. This fact is of much significance. The aortic second sound is often greatly accentuated. When this occurs without renal cirrhosis, general arterio-sclerosis or left ventricular hypertrophy, aneurism should always be thought of, as the aortic second sound is greatly accentuated in aneurisms just above the sinuses of Valsalva, and in fact, in all aneurisms of large size.

To base the diagnosis of thoracic aneurism on the presence of a loud murmur heard over chest without other more significant symptoms and physical signs is an absurdity. That they occur no one denies, and a systolic murmur is often, but by no means always, present. A diastolic murmur is the exception, and when present is usually due to free aortic regurgitation, the result of relative insufficiency, or co-existing arterio-sclerosis crippling the aortic valve, and is heard all over chest. Rarely a diastolic murmur may be heard remote from the heart over a thin aneurysmal sac, containing but slight deposition of fibrin, especially if sacculated, and is often accompanied by a systolic murmur. It is due to the elastic recoil of the aneurysmal sac after its systolic distension. Stokes says that murmurs are often absent, that we can scarcely consider them proper signs of aneurism, at least of the thoracic aorta.[12] A rough systolic murmur accompanied by marked accentuation of the aortic second sound and with local dullness over areas commonly the seat of aneurism, is of considerable diagnostic value. A murmur which I have always looked for but which has only been present in one of my cases, is the one first described by Sansom as follows: "A valuable auscultatory sign in some cases of aneurism when a murmur has been absent, or very feebly heard over the thorax, is obtained by having the patient place within his mouth the small chest piece of the binaural stethoscope, and close his lips over it. On auscultating thus, the observer may hear a distinct or loud systolic murmur in the case of thoracic aneurism, the vibrations being communicated to the trachea, thence directly by the air columns to the ears."[13] When a primary bronchus of one or the other side, commonly the left, is pressed upon, there will be a whistling rhonchus together with diminution or absence of vocal fremitus, respiratory murmur and voice sounds over the affected side. Sometimes signs of consolidation occur from partial or complete collapse of the lung, the result of pressure. And it is always wise when dullness exists, especially at the left apex, unexplained by other existing signs or symptoms, to search for evidences of the presence of thoracic aneurism, as its cause.

In regard to the application of X-rays to the diagnosis of thoracic aneurism, I cannot speak from personal experience, but it is the consensus of opinion of experts in this work, that the X-rays afford a very valuable means of determining the presence and location of intra-thoracic tumors, aneurysmal or mediastinal. Dr. James P. Marsh, of Troy, N. Y., has kindly taken an X-ray picture of a case of thoracic aneurism recently under my observation, which case shows at present a localized expansile tumor, about the size of a small orange, at the junction of the right clavicle and first rib with sternum, and also in right half of episternal notch, with a loud, rasping double murmur, and without tracheal tugging or shock.

ANEURISM OF THE DESCENDING THORACIC AORTA WITH SPINAL CORD SYMPTOMS.

CASE 1. *October 27, 1887. E. E.,* aet. 26, laborer. Two years ago, while lifting, complained of severe pain through region of heart and right shoulder. Was in bed sixteen days. Since then the pain has been very severe and boring, extending through the left side of the chest. Has dyspnœa coming on in paroxysms and weakness in legs from knees down. Has a shuffling gait. Pupils equal. Veins of chest prominent. Left jugular and subclavian veins as well as those of the left arm and forehead prominent. Strong pulsation of carotid and subclavian arteries. Thrill in both supra-clavicular spaces near sternum. Lungs negative. At apex and the base of heart is a double murmur. Systolic murmur in the large arteries. Patellar and triceps reflexes exaggerated. Slight paresis in both legs. Gait spastic in character. *December 25, 1887,* died suddenly from œdema of lungs. *Post-mortem:* Left pleural cavity full of clotted blood. Almost complete erosion of the bodies of three lower dorsal vertebra. Ascending aorta greatly dilated, as were the subclavian and carotids. In descending portion of the thoracic aorta is an aneurism about the size of an orange which had almost completely eroded the bodies of three lower dorsal vertebra, causing pressure on the cord. Pericardium contained about four ounces of serum. Aortic ring dilated and valves incompetent.

ANEURISM OF TRANSVERSE PORTION OF AORTIC ARCH

CASE 2. *Patrick D.,* aet. 36, 'Long-Shoreman. Has had syphilis. *May 1, 1888,* complained of dyspnœa, hoarseness and a boring pain through the right shoulder. Pain and dyspnœa gradually grew worse. Over lungs is a peculiar "hissing" sound. Is very hoarse. Lips and finger tips cyanotic; veins of chest prominent. When patient stops breathing a pulsation of the whole right side is seen. Slight bulging of the sternal portion of the right clavicle. Pupils contracted and equal. Left radial pulse smaller than right. Lungs negative. Heart sounds more distinct at junction of clavicle with sternum than at apex. At that point a musical systolic murmur was heard, but only on holding his breath. Abductor paralysis of left vocal cord.

Patient died from pneumonia one week later. *Post-mortem* showed an aneurism about the size of an orange, adherent to sternum and right clavicle. The transverse portion of the arch was mostly involved. The sac contained several laminated layers of fibrin. Trachea was flattened and the recurrent laryngeal nerve was involved in the sac.

ANEURISM AT JUNCTION OF TRANSVERSE WITH DESCENDING THORACIC AORTA

DEATH FROM PERFORATION OF LEFT PRIMARY BRONCHUS

CASE 3. *B. K.*, aet. 35, sanitary inspector. Family and personal history negative. Denies syphilis. Present trouble began *March, 1891*, after straining. He immediately complained of severe pain in his left side, cough with expectoration, and dyspnœa. Saw him in consultation *April 20, 1891*. Dyspnœa was marked. Lips and finger tips cyanotic. Chest well built and symmetrical. Right pupil larger than left. Right side of chest moves more than left. No localized pulsations. Vocal cords normal. Speech and swallowing normal. Left radial pulse stronger than right. Cardiac dullness normal. Auscultation of right lung normal. Respiratory murmur over left lung feeble and distant. All over chest is heard a peculiar wheezing sound. Heart sounds feeble, first sound murmurish. Symptoms pointed toward an aneurism or intra-thoracic growth. The suddenness of the attack, severe pain and no ill-health pointed toward aneurism. Entire absence of local bulging or expansile movement of chest and absence of all murmurs or thrills pointed toward growth.

Six weeks later he developed pericarditis with effusion. I tapped the pericardial sac, which gave him relief. *September 1st* he died suddenly from hæmoptysis.

Post-mortem showed heart practically normal; at juncture of transverse and descending portion of the aorta was a cylindrical aneurysmal sac about four inches long. Its outer surface was adherent to the left primary bronchus and pulmonary artery, which were very much narrowed. At the point of juncture with the left primary bronchus, a perforation existed large enough to admit the little finger.

ANEURISM OF ASCENDING PORTION OF THORACIC AORTA

CASE 4. *J. H., November, 1891.* Aet. 48; Ireland, moulder. Family and personal history negative. Denies syphilis. Present trouble began about two months ago with severe spasmodic cough, expectoration and dyspnœa. Three weeks afterward swelling in right side of neck and arm occurred. About six weeks ago complained of severe pain extending from right shoulder to infra-clavicular region and to back of head. Voice, speech and swallowing normal. Has vertigo and is generally cyanotic. *Physical examination:* Collar of flesh (Walshe) marked. In supraclavicular regions above middle of clavicles and extending to their acromial ends are well marked swellings, consisting of bunches of dilated veins which fill from above. Veins of chest and left arm dilated. Left arm œdematous. In the right mammary region exists an area about the size of one's hand which pulsates. Over this region, between the second and fourth rib, expansile pulsation can be felt. Apex of heart displaced downward and outward. Breathing rapid. Movement of chest less on left than on right side. No tracheal tugging. Right radial and darotid pulse smaller than of opposite side. Dullness extends one inch to right of sternum. Area three inches by three and one-half inches. Liver enlarged. Right pupil larger than left. Patient died *December, 1894*, of pneumonia.

Post-mortem: Heart dilated and flabby. Arising from the ascending portion of aorta just above sinuses of Valsalva is a globular aneurysmal sac five inches by six inches by five inches. The sac was adherent to sternum, lungs, costal cartilages and right primary bronchus. The innominate vein and right subclavian and carotid artery were compressed. Sac was filled with laminated fibrin about one inch thick.

ANEURISM OF ASCENDING AORTA INVOLVING BY PRESSURE THE TRACHEA AND LEFT PRIMARY BRONCHUS

CASE 5. *September 11, 1897. G. D.,* aet. 55; Germany; machinist. Family and personal history negative. Had syphilis twenty years ago. Present trouble began six months ago with cough, sense of pressure in chest, dyspnœa on exertion and sharp pain in sternum and in shoulder extending to head. Has trouble in swallowing and is hoarse at times.

Physical examination: Pupils equal. Temporal artery and branches dilated on right side. Neck broadened. Pulsation in upper sternal region extending slightly into both infraclavicular regions. Apex of heart displaced downwards and outwards. Radial subclavian, axillary and carotid pulses stronger on right side. No tracheal tugging. Deep pressure over episternal notch gives distinct expansile pulsation. Dullness in upper sternal and infraclavicular regions; over this region a distinct double tone is heard. First sound at apex murmurish, otherwise heart sounds normal. Respiratory murmur diminished on lower whole left side. An inspiratory stridor is heard over whole chest.

Post-mortem: Bones of chest wall very soft. Left lung in a condition of almost complete collapse. Heart dilated and flabby, shows patches of interstitial myocarditis. Aneurism begins at sinus of Valsalva and extends to junction of ascending and transverse portions of arch, is sixteen by ten by nine centimeters and globular. Left primary bronchus less than one-third its normal size. Left common carotid small than right. Trachea deeply indented by pressure of the aneurismal sac.

ANEURISM OF TRANSVERSE AND DESCENDING THORACIC AORTA

CASE 6. *November, 1896. N. B. N.,* aet. 48; ironworker. Denies syphilis, but admits having had a single sore on penis, but with no eruption. Present illness began about one year ago after straining. He felt something "give way," followed by severe pain.

At present he complains of severe pain through upper left chest extending through shoulder blade, numbness in both hands and fingers. Has some trouble in swallowing solids. Is hoarse at times. Veins of chest prominent, especially of left side. Pulsation in infraclavicular and infrascapular regions of left side. Apex of heart displaced downward and outward. Soft double murmur heard at base. Dullness in upper sternal region extending slightly into both infraclavicular regions. Left vocal cord paralyzed. Right pupil larger than left. Tracheal tugging well marked. No difference in radial or carotid pulses.

Post-mortem: Heart dilated and flabby. Aorta dilated at base. At junction of transverse and descending portions of the arch existed a globular aneurism, involving a large portion of the transverse and part of the descending aorta. Posterior wall of aneurism had partially eroded the anterior surface of the lower cervical and upper dorsal vertebræ. Sac was adherent to left lung, compressing left bronchus, trachea, innominate and left carotid arteries. Sac walls very thick and atheromatous, and was five by four by five inches.

ANEURISM AT THE JUNCTION OF TRANSVERSE AND DESCENDING THORACIC AORTA; RUPTURE INTO THE ŒSOPHAGUS; DEATH.

Francis McCue, aged 67; engineer; widower, and born in Ireland. He has been a moderate drinker with an occasional exacerbation.

Family history: Good.

Patient's history: He always enjoyed good health previous to a few years ago. He then began to have attacks of severe cutting pain in the region of the stomach. The attack would last for a time varying from a few days to a few weeks, and the only remedy was morphine. He has been under treatment at different times by some of the best physicians, but without permanent relief. He was admitted to St. Peter's Hospital *October 6, 1892.*

The only thing of which he complained was the severe pain in the stomach. He was rather inclined to obesity, and his voice was somewhat hoarse. His chest was full and round. The expiratory murmur was prolonged and low pitched. The heart sounds were faint, but there were no murmurs; there were no other abnormal signs about the chest. Gastric neuralgia was the diagnosis made, and he was given hypodermatic injections of morphine. He remained in about the same condition until the evening of *November 7th,* when an unusual noise was heard in his room and he was found lying on the floor bathed in perspiration and in a deathly pallor. The rectum had emptied itself, and it was afterward found that the discharge was tarry. He revived and felt better during the night and next day, but in the evening he again began to have the tarry discharge and to vomit large quantities of clotted and fluid blood, the amount averaging from two to eight ounces at a time. The vomiting and purging came on at intervals of from a half to an hour and lasted two or three minutes each time. When an attack was about to come on, he would complain of blindness, grow pale and then begin to vomit, each time falling back exhausted and covered with perspiration. This continued throughout the night, and he died on the morning of *November 9th.*

The autopsy showed the heart to be pale but normal in size. The pleural cavities were obliterated by adhesions, and the mediastinum contained an excess of fibrous bands. The aorta was dilated at the arch, and at the junction of the transverse and descending portions was a dissecting aneurism which had evidently ruptured into the œsophagus. The whole lining of the aorta contained small atheromatous areas and it was through one of these that the aorta communicated with the aneurismal sac, the opening being just large enough to admit a wooden toothpick. The liver and spleen were normal. The stomach contained about one pint of dark fluid, which was evidently blood, and the lining membrane was pale but contained no ulceration. The whole intestinal track contained a sticky black substance resembling somewhat the tarry discharges from the bowels. The kidneys, excepting a cyst about the size of a butternut, which was found in one of them, were normal.

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SURGICAL TREATMENT OF URETHRAL STRICTURE*

BY DOUGLAS C MORIARTA, M. D.,
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Gentlemen:

Your president has asked me for the surgical treatment of urethral stricture in the male; surely a most important subject, and worthy of your closest thought and most careful discussion; it is of equal importance both to the general practitioner and the surgeon. I shall attempt to give you my personal experience with these cases.

Perhaps I can present the subject more clearly if I consider it under two heads, viz.: *first*, the emergency cases in which immediate procedure is imperative; *second*, the elective cases where we can consider the condition of our patient and act accordingly.

The first class includes those cases of traumatic origin in which there is an obstruction to the escape of urine, and to the introduction of an instrument through the urethra; *second*, the spasmodic strictures where the passage of urine is prevented by a spasm of the muscle, due to some irritation in the urethra, bladder or rectum; but when this spasm subsides the urine can be voided and an instrument passed; and *third,* those strictures of small calibre which have been neglected or not recognized and which, from various causes, take on an acute condition, closing the lumen of the urethra and preventing the passage of urine. Exposure to cold, wet feet, extreme fatigue or a debauch, are all factors in producing this condition.

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* Read before the Medical Society of Saratoga Springs, January 24, 1902.

The elective cases include: the acute strictures of large or small calibre; they may be single or multiple, and vary in length from a thin membrane to several inches; the chronic or slow-forming strictures, having all the characteristics above described and, in addition, varying in the character of the tissue formation. They are very much more resisting, some of them so much so that they have been termed resilient; if there are several short strictures, or one long one, the canal is apt to be tortuous. They may occur anywhere in the urethra, from the meatus to the bladder, but most commonly in the pendulous portion and rarely in the membranous portion.

In general the treatment of urethral strictures is a gradual dilation with steel sounds or rubber bougies; or rapid dilation with a divulsor; or by electrolysis; or by internal urethrotomy with any of the various urethrotomes, and external urethrotomy with or without a guide. In the event of any of these procedures being adopted, it is absolutely essential to supplement the treatment with the continued use of steel sounds; though do not give your patient a sound and allow him to finish the treatment. They must be continued indefinitely at regularly increasing intervals, until a full-sized sound will practically drop into the bladder. These are only interrupted when complications supervene, of which epididymitis is the most common. By thus being faithful for a long time, some of these cases will be cured, the stricture tissue apparently being absorbed. The latter statement I have demonstrated to my satisfaction since commencing this paper by examining a goodly number of old cases.

General anesthesia, I believe, is imperative in treating emergency cases; and I think it is better in the elective operations for stricture of the urethra where internal urethrotomy is to be done, unless the anesthetic is contra-indicated because of some organic condition. I confess, however, that I do not expect you all to concur in this opinion; many of you use cocaine satisfactorily and will continue to do so. Emergency cases give us the greatest amount of anxiety, and at times tax our ingenuity and skill to the utmost. The success in the treatment of tight or closed urethral strictures means so much to the patient, and depends so much upon the individuality of the operator, that one who attempts the relief of these conditions should be thoroughly familiar with all the details incident to the operation, and supplement all with gentleness, patience and perseverance. It is well for us to realize at the commencement that we have a most difficult obstacle to overcome. With a proper set of instruments, a knowledge of their value and an understanding of the condition we have to meet, we will eventually succeed. Personally I have only two failures to record where I was unable finally to enter the bladder to relieve the distension, and they were both of traumatic origin.

A knowledge of anatomy is as essential here as elsewhere in surgery. We must cut consistently. If in the membranous or prostatic portion it must be on the floor of the urethra; while the roof of the urethra is the point of election in the pendulous portion, except just at the meatus where we usually cut the floor. A perfect surgical technique is imperative and must be followed; though I fear that this procedure, like curettements, does not appeal to all operators as of the same importance as a section or an amputation. This should not be so, even if the technique is troublesome to follow. There is another suggestion, and that is proceed slowly, carefully, do not become discouraged or expect the first instrument or two to pass the stricture. If the patient is not greatly distressed it is well worth your while to administer a quarter grain of morphia and a fiftieth of atropine, following this in an hour with a hot sitz bath. If possible have the bath located where the patient can hear running water; many a tight, previously impassable stricture has thus yielded in my practice.

When the patient is anesthetized, or ready, I commence all these cases, no matter what the type, by trying first a full-sized sound. This may not appeal to all of you, but I have often passed a full-sized sound into the bladder when smaller instruments have failed. This will occur in spasmodic stricture, and where the wall of a dilated portion of the urethra or sac acts as an obstruction, thus preventing the passage of a small instrument. Never use force. Remember you have both a wedge and a lever in the ordinary steel sound. If this fails to penetrate the urethra, and smaller instruments of various curvature meet the same fate, I try the olive-pointed soft instruments which hug the floor of the urethra. Failing with this, I try the filiform guides, introducing a goodly number into the urethra one after the other, as fast as one is stopped, working first with one and then another until one finally passes the stricture. When this is accomplished we decide according to the location and character of the stricture whether we will introduce, over the guide, a Maissonneauve urethretome and cut with a small knife, to be followed by the dilating urethretome to full size or by a divulsor. When there is an objection to cutting, a divulsor with a tunneled end is used over the guide as a starter. Even in the pendulous portion once introduced and dilated larger sounds can follow. In some of these cases we are not able to pass either over the filiform guide; when if we leave the guide in the urethra, after a few hours an instrument can be passed over it, or a larger instrument used when the work has been withdrawn. If the stricture is in the membranous portion the divulsor should be the choice; if not successful in passing it as we should try with the staff of a Maisonneuve urethrotome. If this is a success I always use a small knife that the normal urethra may not be injured following the Maisonneuve urethrotome with an Otis dilating instrument. We very soon learn the geography of these strictures which is of advantage in finding one's way through the tortuous canal. The danger of making a false passage when using small rigid instruments in these cases should be borne in mind; and when one has been made a very serious complication presents itself. One can usually determine this condition by the feel of the instrument; the tight stricture grasps the instrument, while if a false passage is present no such sensation is apparent. If a false passage is made, and the patient can urinate, nothing further should be attempted for many days. If, however, the patient is not able to relieve the bladder, take a soft instrument and you may succeed. If this fails, external urethrotomy may have to be done, and the danger from extravasation is very great. Small, rigid instruments are only for the very expert, and are risky for them. If anywhere, the saying, "fools rush in where angels fear to tread," is applicable here. In some obstinate cases the instrument of Gross may help us out. This will often penetrate the stricture far enough to enable one to cut from before back—just a niche is often of great service, or if the structure is a short one we can cut through, following this procedure by an Otis dilating urethrotome ; as soon as this is done use a full-sized sound.

When all of these procedures have failed you have then to face external urethrotomy, with or without a guide, aspirating the bladder, or do a suprapubic operation and try from within outward. The latter has stood me in hand twice where external urethrotomy would have been required without a guide; owing to the condition of the patient I was afraid of the prolonged anesthesia, and was fortunate in passing the stricture successfully and securing a proper result; though another time I would do in addition an external urethrotomy. Aspirating the bladder I considered a harmless procedure until a year ago. At that time I was called in consultation to see an old man whose bladder had been previously aspirated and in whom extravasation of urine had occurred, from which condition he succumbed twenty-four hours latter.

There is no condition which taxes the skill of an operator so much as an external urethrotomy without a guide; and we have all seen competent men fail in this. If you have been trying to get past a stricture and have failed, and are about to attempt an external urethrotomy, have the patient try to urinate before the anesthesia is commenced; they will often succeed, and if so, rest in bed, sitz baths, etc., may help so that the external procedure may be avoided. Details of this procedure would be both tiresome and unnecessary here. If there is severe hæmorrhage from internal urethrotomy it can be controlled either by pressure over a sound in the urethra, or by strapping the penis with rubber plaster.

The treatment of strictures of large calibre is usually instituted because of chronic discharge, vesical irritation, frequent micturition or obscure pains in the loins or side of thighs. In most of these cases the discharge is treated and the stricture neglected or ignored. I know of no single class of cases which will reflect so much to the practitioner's credit as these, if he is abreast of the situation. Strange it is, but true, that this class of strictures is not generally appreciated. To treat these cases it is well to know the location, number, character and extent of the strictures; this is done by the use of the steel sounds or bulbous bougies, either metal or rubber.

Before attempting even the preliminary examination in elective cases, particularly if it is the first examination, it is well to give the patient ten grains of boric acid every four hours for several days, and ten grains of quinine with one-quarter grain of morphia an hour previous to the examination. It is also wise, if an examination has never previously been made, to insist on making the first one at the patient's home; have him in bed, and be sure he has observed the precautions suggested. After the first examination there will probably be no complication, and the treatment can safely be continued at the office; though there is liable to be some disturbance in elderly men when the sound is introduced, particularly if the stricture is a resilient one. I diagnose this class of strictures with a steel sound in preference to bulbous bougies, because I believe one is less apt to think the physiological narrowing of the urethra a stricture. Later I use a metal bulbous bougie to determine the length and character of the stricture. In the extent of the examination, the size of the instrument and treatment, I am guided by the irritability of the urethra; this is exhibited by the spasm of the muscles, or the way in which the sound is held. After this has been determined I continue the treatment with sounds, introducing them, as a rule, only to the prostatic portion and practically never into the bladder; this is done regularly for a time with intervals of about four days, though often it is better to make it longer, even a week. I cannot too strongly condemn the practice of those who introduce a sound every day, or even second day. If one only observes the clinical symptoms of increased urethral discharge after passing the sound in these cases, they can but conclude that if this occurs there must be increased congestion and swelling, which should subside before another instrument is passed. I have a history of a man who was the victim of gonorrhœal rheumatism and markedly crippled, who also had strictures. Internal urethrotomy had been done three times, and as frequently relapsed, because each time after a few attempts at using the sounds his knees would exhibit a sharp exacerbation and prohibit the use of sounds.

Concerning the extent to which the dilatation should be carried, I have never followed the suggestion of Dr. Otis dogmatically; nor do I believe that one should dilate or cut in all cases to the extent that he indicates is necessary. However, if it is required I do not hesitate to do so. If the chronic discharge continues after I reach a full-sized sound, as near as I can determine, I use two or three minims of the solution of nitrate of silver, five grains to the ounce, locally with a Keyes syringe.

In a goodly number of these cases meatotomy must be performed before a sound of sufficient size can be used to perfect a cure. And here a word of warning, do not cut too much! If the stricture is particularly obstinate and the tissue very resisting, associated with frequent micturition and some cystitis, I would surely do an internal urethrotomy, and then follow with large-sized sounds.

Electrolysis has been advocated in this class of strictures of the urethra, and many flattering results claimed; I am free to confess, however, I have never been satisfied with it. As an outfit, one needs a galvanic battery with a milliamperemeter and several bulbous bougies with the staff insulated. The intensity and duration of the current are governed by the character of the stricture tissue.

There are quite a number of cases, particularly among elderly men, who will not submit to an internal urethrotomy; and where the tissues are markedly resilient or resisting, and are from one-half to three inches long, a sound will be required once a week or two during the patient's life; and one may expect a chill each time a sound is introduced, unless the greatest care is observed. In these cases a No. 20 or No. 22 is about as large as can be introduced.

In cases of perineal abscess complicating strictures, no matter where the opening is situated, the stricture must be cut or dilated and kept open if the fistulæ are to close.

If we have extravasation from traumatism it should be located, if possible, and the tissues promptly incised, thus preventing their destruction.

THE INFLUENCE OF THE DISCOVERY OF THE RELATION OF BACTERIA TO DISEASE ON THE PRACTICE OF MEDICINE EXCLUSIVE OF SURGERY.

AWARDED THE SCHUYLER ALUMNI PRIZE FOR 1901.

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Etiology

Scientists, and every one, in fact, in these days of progress, are not satisfied unless the *causa prima* of all effects are known. It was easy enough to satisfy earlier observers, and in ancient, or in medieval times, all unknown causes were ascribed to the gods.

The Greeks before Troy ascribed the presence of the great pestilence, which nearly devastated their armies, to the arrows of the offended god, Apollo. Camp hygiene at that early date was an unheard of subject and presented a problem as great as concerns our armies to-day. Homer, in the Odyssey, makes the father of gods, and men say: "Lo, how men blame the gods: From us they say spring troubles. But, through their own perversity and more than is their due, they meet with sorrow." This notion that pestilences are punishment for sins, and that they can be combated by sacrifices, prayer and pilgrimages, survives to-day in the midst of civilized Europe—an example of the deep-rooted proclivity in untrained minds towards a search after the animate.

Through bacteriology we have been enabled to determine, practically with certainty, the causes of numerous diseases, while we are still in doubt as to the specific germs concerned in other conditions. And not only have the causes been ascertained in many diseases, but the mode and portals of infection have been determined, which is of great practical value in the prevention and treatment of diseases. Then, too, as has been pointed out by various observers, there are certain conditions which may not be constantly associated with any well-defined group of clinical manifestations although caused by bacilli probably pathogenic under certain conditions.

Let us first consider those diseases in which the specific germ has been discovered.

Diphtheria.—Perhaps, of all the specific diseases that have engaged the attention of physicians and bacteriologists, none have been productive of greater results, as we shall see further along in our discussion, than diphtheria. The diphtheria bacillus was first grown in pure culture by Löffler, in 1884, although, as we have already stated, it was observed by Klebs the year before. The portal of infection for the diphtheria-bacillus may be constituted by any mucous membrane or wound surface, infection commonly taking place in the pharynx.

Influenza.—Among the acute general diseases which have created a havoc the world over during the last ten years influenza is certainly at the head of the list. In 1892, Pfeiffer published a classical work on the cause of influenza wherein he accurately described the causal relationship between the bacillus and the disease, although Kirchner probably first saw the bacillus. This organism was first seen and isolated from the sputum of influenza cases during the great epidemic of 1889-90. Like a number of other infectious diseases, influenza was suspected to be due to some minute parasite long before the true cause was discovered, but failure to find the germ was due to the fact that it stained with difficulty; is an exceedingly small germ, and that it did not grow on our ordinary culture media.

Tuberculosis.—Tuberculosis, the enemy of mankind and the most devastating of all diseases the world over, was commonly believed to be an infectious disease many years ago in some countries, but it is only within comparatively recent times that the infectiousness of the disease has become an established fact in scientific medicine. Villemin gave the first evidence of the infectious nature of tuberculosis by inoculation of tuberculous material. The tubercle-bacillus was discovered by Koch in 1882. What a hope was raised the world over when this discovery was announced. Every tuberculosis patient then anxiously awaited the cure which every newspaper promised. Still, while the results of this discovery were not so prolific as one might wish for, it has lead to other investigations which will undoubtedly prove of greater importance.

Asiatic Colera.—Koch likewise discovered, in 1883, that the exciting agent of Asiatic cholera is the comma-bacillus. These comma-bacilli are found constantly in all casses of Asiatic cholera, and in innumerable amount; in part in pure culture in the liquid intestinal contents; further, in the intestinal walls of patients; and only exceptionally in other organs. The vibrios can be demonstrated in the feces on an average to the tenth day after the inception of the disease and have never been demonstrated in association with other diseases.

Bubonic Plague.—Another disease which has attracted considerable attention during the past two years, in which the cause is positively ascertained, is bubonic plague. The exciting agent of the plague was discovered by Kitasato and Yersin during an epidemic of the plague in China in the year 1894. The plague-bacillus gains entrance into the human organism most frequently by way of slight injuries, scratch-wounds, *et cetera.* Infection through the skin may take place simultaneously at several different points of the body in the same case, and in all probability it can occur through the intermediation of insects. Much that we know concerning this disease is due to the work of the German commissioner who went to Bombay in the beginning of the year 1897.

Relapsing Fever.—The cause of relapsing fever was, in 1873, found by Obermeier, a former assistant of Rudolph Virchow, and who died prematurely, to be a special spiral bacterium, which he designated the spirocheta of relasping fever. Obermeier's discovery was the far more-reaching, because with it an organism of the class of bacteria was for the first time recognized as the cause of a human infectious disease. These spirilla are present, and in varying number, only in the blood of those suffering from relapsing fever, in which they appear a short time before the onset of the fever, multiplying rapidly during the continuance of the fever, to disappear, a short time before the cirtical defervescence, until the onset of the next febrile paroxysm. These spirilla are not ordinarily found in the secretions and excretions of patients suffering from the fever, and with equal variety outside the human body, they are, therefore, most rigid blood-parasites. Just how this disease is transmitted is yet unknown.

Tetanus.—Nicolaier, of Götlingen, in 1885, recognized the exciting agent of tetanus as a bristle-like rod with a terminal bulbous spore, but it was first isolated by Kitasato, in 1899, from the foreign bacteria always associated with it in infectious earth and in pus from a case of tetanus and grown in pure culture. The postal of entry for tetanus-bacilli in human beings may be constituted by any lesion of the external integument. Before the days of aseptic surgery it was the frequent concomitant of operative procedures. In human beings the bacilli never enter the blood or the viscera, but remain confined to the site of original infection.

Anthrax.—Anthrax, which is a disease of animals, particularly of sheep, is sometimes transferred to human beings through contact with animals suffering from this disease or from the cadavers of those dead of the disease. Tanners are particularly exposed to the danger in manipulating the skins of animals dead of anthrax. As early as 1849 Pollender, in Germany, and Rayer and Davaine, in France, in 1850, were the first, independently of each other, to detect bacilli in the blood of animals suffering from anthrax. The experimental development of the disease by means of the bacillus, however, was first successfully accomplished by Koch in 1876.

Glanders.—Another disease peculiar to animals, but sometimes transferred to man, is glanders. In human beings, who, in the vast majority of cases, are infected by contact with horses suffering from glanders, the skin, without doubt, constitutes the principal portal of infection. From a pathologic-anatomic standpoint, glanders belongs to the group of diseases that, like tuberculosis, give rise to the formation of nodules that exhibit a marked tendency to disintegration and softening. The exciting agent of glanders was discovered in 1882 by Löffler and Schütz.

Gonorrhœa. — Gonorrhœa, a disease which formerly was treated by purely medical means, has now more or less passed into the hands of the surgeon. But the disease is so universal that we may at least call attention to its etiology.

The exciting agents of gonorrhœa, the gonococci, discovered by Neisser, in 1879, are cocci which are separated into two distinct hemispheres by means of a dividing fissure. Gonococci are constantly present in secretion from all gonorrhœal inflammations.

Diseases caused by the Protozoa.—The protozoa, the lowest forms of animal life (consequently not "bacteria"—although as previously stated we believe the class of diseases caused by these parasites come clearly within the limits of our subject), have hitherto taken part in the etiology of but a small number of diseases in human beings. Perhaps the future will show that they occupy a larger field of activity. In a number of infectious diseases whose exciting agents are as yet unknown, animal parasites are believed to have been observed—as, for example, in whooping-cough, in carcinoma, and they have been apparently found as the cause in smallpox. The connection of disease with the lowest forms of animal life has, however, been established with certainty only for two affections—namely, dysentery and malaria.

Dysentery.—The cause of dysentery (amebic enteritis) was recognized by Losch, in 1871, as peculiar animal parasites belonging to the class of protozoa-amebæ—which were found in dysenteric stools. Many other observers have since studied this organism carefully and confirmed their etiological relation to dysentery.

Abscess of the Liver.—Abscess of the liver, which occurs so frequently in tropical regions, has long been associated clinically with dysentery. It has mostly been considered as a sequel of the latter disease, and although a condition needing surgical interference comes under our category. As a matter of fact, the pus and the abscess-membrane in cases of tropical abscess of the liver almost invariably contain the same amebæ that cause dysentery.

Malaria.—It is due to the elaborate study of malaria by Laveran that we are indebted for the discovery of the cause of that disease in 1880. The parasites of malaria are unicellular forms of life that at an early stage are endowed with ameboid movement. They belong to the class of protozoa, but there is no unanimity of opinion with regard to their position in the zoologic scale. The designation malarial plasmodia, proposed by Marchiafava and Celli, is appropriate. The parasites appear in part free in the blood-plasma, and in part in association with the red blood corpuscles.

Besides the diseases mentioned above due to bacteria or to the protozoa, we have certain classes of diseases which have been designated mycoses, the tiology of which is concerned with the moulds (filamentous fungi and the budding fungi).

Etiology of Mycoses.—The etiology of the diseases in human beings induced by filamentous and budding fungi has been determined by the careful studies of bacteriologists.

Among these diseases we have the dermatomycoses, which include favus, herpes tonsurans, pityriasis versicolor and erythrasma. Psoriasis was once included on the list but its supposed excitant, the epidermis phyton, has been recognized as a factitious product (Ries).

Favus.—The cause of favus was recognized as early as 1839, by Schönlein, as a filamentous fungus, which, in his honor, has been named *Achorion schonleinii,* and which was the first of all organized causative agents of diseases discovered.

Gruby and Malmsten discovered the cause of herpes tonsurans, in 1845, to be the *trichophyton tonsuraus.* The presence of this fungi may be cited as the cause, also, for other parasitic cycosis, eczema marginatum, onychomycosis, trichophytina, and a number of other affections of the skin.

A year later (1846) Eichstedt first described the cause of pityriasis as the *microsporon furfur.*

Erystrasma, a circumscribed erythema of the skin, is caused by the *microsporon minutissimum.*

Pharyngomycoses.—In the pharynx mycoses are not at all rarely observed in certain situations. The fungous vegetations which do not give rise to any particular disease, although they act as a mechanical irritant giving rise to slight pharyngitis, appear as small, porcelain-white plugs, mostly in the lacunæ of the tonsils. They consist, however, as a rule, not of true molds, but more commonly of filaments of the leptothrix buccalis, whose botanic position has not yet been clearly made out, but which is ordinarily included among pleomorphic bacteria.

The keratomycoses and otomycoses are due to the presence of the *aspergillus* fumigatus.

Pneumonomycoses have been observed repeatedly in human beings, and are found by the bacteriologist to be due to both the *aspergillus* and the *mucor.*

Thrush.—Thrush, a local disease most commonly found in new-born children, results from the lodgment and proliferation of the *thrush-fungus.*

Etiology of Inflammatory Diseases.—Through bacteriology we have also been enabled to discover the causation of the various inflammatory diseases and of suppuration. Principal among these conditions stands erysipelas, which is excited by the streptococcus erysipelatis of Fehleisen, which is now considered as identical with the streptococcus pyogenes.

Lymphangitis.—Lymphangitis has been found to be due to pyogenic cocci, and at times to the bacterium coli. Also the infectious form of phlebitis, which occurs as an associated manifestation of numerous infectious diseases, may be caused by the same micro-organisms as give rise to the original disease. Thus, for instance, tubercle-bacilli have been found in the plebitide of tuberculous individuals, and the streptococcus pyogenes in the phlegmasia alba dolens of puerperal women, or the typhoid bacillus in typhoid fever.

In the inflammatory conditions of the nose and throat, staphylococci and streptococci have been found, and also pneumococci and pneumobacilli to be the cause of the lesions.

Meningitis.—Inflammation of the cerebral menings occurs as a primary disorder in the form of epidemic cerebro-spinal meningitis when it is due to a special organism the *diplococcus intracellularis meningitidis* (Weichselbaum, Jäger). When meningitis occurs as a secondary condition, as in pyemia, and numerous infectious diseases, especially in the sequence of otitis media, inflammation of the accessory cavities of the nose, and in croupous pneumonia. From the exudate in cases of secondary meningitis there have been cultivated the diplococcus lanceolatus Fränkel, the streptococcus pyogenes, the stephylococcus pyogenes, the bacterium coli, and the diplobacillus pneumoniæ Friedländer, and in cases of tubercular meningitis, the tubercle-bacilli.

Typhoid Fever.—In view of their constant presence in all cases of typhoid fever, and of their occurrence exclusively in this disease, the Eberth-Gaffky bacilli (first observed by Koch and Eberth and grown in pure culture by Gaffky in 1884) may be considered as the exciting agents of typhoid fever, although experimental development of typhoid fever by means of the bacilli has not been induced.

Pneumonia. — The etiology of croupous pneumonia is more complex. Fränkel's pneumococcus may be looked upon as the causative agent of lobar pneumonia, as this organism is demonstrable in more than three-fourths of all the cases in the pulmonary tissues, which, normally, are entirely free from bacteria. Streptococci alone, or in association with staphylococci, rarely staphylococci alone, may, however, be found in pneumonia foci.

Actinomycosis.—A disease, whose exciting agent occupies—to a certain degree—a connecting link between molds and bacteria—is actinomycosis. Kruse includes this organism among the *streptothrices.* Isolated cases of actinomycosis in human beings had already been observed by B. V. Langenbeck (1845), and by Lebert (1857), but the disease was first clearly recognized and accurately described as an independent affection by J. Israel, in 1878. Bollinger, in 1877, recognized its causal agent as the actinomyces or ray-fungus.

Streptothrix Broncho-Pneumonia.—Norris and Larkin recently reported two cases of necrotic broncho-pneumonia where the streptothrix was found in the exudate, the pleura was covered by a necrotic layer containing clusters of this organism and numerous streptococci and the bronchi large and small had clusters either free or lightly attached.

Meat Poisoning.—Botulism—a disease arising from the ingestion of special kinds of sausage, by decomposed salt fish, smoked meat, ham, etc., has been investigated by bacteriologists with regard to the exciting agent, but the whole question was involved in considerable doubt until recently, when Van Ermengem, in an epidemic at Ellezelles (Belgium), made the discovery of a specific anærobic microbe, the *bacillus botulinns.*

In the foregoing named diseases the cause has been positively ascertained, and we now come to a class whose bacterial cause is probably identified.

Malta Fever.—In this class we find Mediterranean or Malta fever, which is not of much interest to us, as it is confined to the countries along the Mediterranean coast, and which resembles typhoid fever, except that ulceration of Peyer's patches does not occur. Bruce discovered the organism which probably caused this lesion, and therefore it is called the *micrococcus melitensis* of Bruce.

Leprosy.—Leprosy, while seldom seen in this country, attracts our attention as it is of frequent occurrence in our new possessions. The bacillus of leprosy was discovered by Amner Hansen. It has thus far not been successfully cultivated, and some doubts exist as to Hansen's bacillus being the true cause.

Smallpox.—While no bacteria have been found in smallpox or vaccinia which seems to have any relation to the disease except as secondary infections, L. Pfeiffer and others have constantly found small homogeneous bodies in the epithelial cell substance, which apparently belong to the class of protozoa, and from their constant presence are believed to be the probable specific micro-organisms of both diseases.

Regarding the bacteria believed by some to be causally connected with certain diseases we are still in doubt.

Yellow Fever.—In 1897, Sanarelli announced the discovery of a micro-organism which he claimed to be the specific cause of yellow fever. This he called the "bacillus icteroides." It is found in the circulatory blood and in the tissues of yellow fever patients. It resembles the colon-bacilli. Since Sanarelli's supposed discovery a number of investigations have been made into the causal relation of this organism to the disease, some of which seem to cast considerable doubt upon its being the specific cause of yellow fever.

Whooping-Cough.—From time to time observers have found in the sputum of persons suffering from whooping-cough small bacilli, often in great numbers. They have been lately studied especially by Koplik, Czaplewski and Hensel, who believe that these bacilli are the cause of the disease.

Syphilis.—The exciting agent of syphilis is not yet known. Of the numerous bacteria that have been found and to which etiologic significance has been attached, the bacilli described by Lustgarten seems worthy of mention. Whether bacteria are the cause of syphilis at all is wholly doubtful, although Lustgarten's bacillus may possibly bear some relation to this disease.

Soft Chancre. — The exciting agent of soft chancre may be Unna's bacillus, but experimentations do not confirm it.

Cystitis. — In cystitis the bacterium coli commune of the bacterium ærogenes may play an important part in its etiology, although in other specific diseases, cystitis may be a complicating lesion when it is due, as in gonorrhœa, to the specific organism.

Instead of giving diseases caused by certain germs, we might also make a list of germs which are not always pathogenic and are not constantly associated with any well-defined group of clinical manifestations.

Bacillus Pyocyaneus.—The bacillus pyocyaneus is, in general, quite a harmless bacterium, being present in the pus of wounds, in cases of otitis media, *et cetera,* giving rise to greenish or bluish. In children sometimes this organism exhibits pernicious activity, and it may cause, under certain circumstances, a severe general infection.

Weil's Disease.—The proteus-bacteria discovered by Hauser, in 1885, are present in all putrefactive processes, and also in the gastro-intestinal canal. According to H. Jäger, Weil's disease is caused by the proteus. E. Levy found this organism to be the cause of *hemorrhagic gastro-enteritis* after eating spoiled meats.

Bacillus of Malignant Edema. — The bacilli of malignant edema, the vibric septicus, are widely distributed in nature. They are the attendants of putrefactive processes. Malignant edema occurs at present, but seldom in human pathology, and the rareness of this condition, as well as of the *septicemie gangreneuse* and the *gangrene gazeuse* of the French, is due to the practical results of the researches of the bacteriologists.

Bacillus of Friedlander.—Originally it was supposed that the bacilli found in several different lesions, principally in ozena, rhinoscleroma, otitis media, lobar pneumonia, *et cetera,* were one and the same organism—which was termed the bacillus of Friedländer. Bacteriologists have reclassified the bacteria found in these conditions, and have found that the following named bacilli were formerly included under the bacilli of Friedländer: Bacillus nucorus capsulatus Friendländer, bacillus capsulatus Wright, bacillus capsulatus Pfeiffer, bacillus of rhinoscleroma, Howard's bacillus of hemorrhagic septicæmia, and others.

Etiology of the Exanthemata.—Along this line of work there is as yet no proof that micro-parasites occur as the exciting cause of the typical acute exanthemata like typhus fever, scarlet fever and measles unless it be of smallpox. It is certainly striking that the results up to the present time should be negative in just those diseases most markedly contagious, and this is, perhaps, explicable on the supposition that bacteria are not concerned in these affections.

Etiology of Malignant Tumors. — Enlightenment as to the germs causing malignant tumors, especially the epithelial tumors and among them the carcinomas, would be equally desirable. The objects that have, up to the present time, been described as the parasites of carcinoma, will not stand criticism. Important reasons, moreover, are adduced for the view that these tumors are, perhaps, not to be attributed at all to micro-parasitic cause, and hence very stringent proof is necessary to produce conviction on this point.

(*To be continued*)

Editorial

> Lying there and thinking of many things, too grateful for the rest to chafe at the imprisonment, and striving for peace with himself, Hamilton one day conceived the idea of immersing yellow-fever patients in ice-water. Microbes were undiscovered, but Hamilton, perhaps with a flashing glimpse of the truth, reasoned that if cold weather invariably routed the disease, a freezing of the infected blood should produce the same result. He succeeded in convincing Stevens, with the issue that when the scourge was over, the young West Indian doctor had so many cures to his credit, where all other physicians had failed, that the City Council presented him with a silver tankard, gratefully inscribed, and filled with golden coins. Hamilton's fecund brain, scattering its creations, made more than one reputation.
>
> GERTRUDE FRANKLIN ATHERTON.
>
> *The Conqueror*
> *Being the True and Romantic Story of*
> *Alexander Hamilton*

Competition in Commerce and Science

In the present-day struggle for the first place in the strenuous life of commercialism there is constant effort to prevent competitors from using and copying ideas and methods. The frequent suits on account of the infringement of patents and copyrights indicate how fierce the competition is and how bitter the commercial rivalry. In the domain of science, however, conditions are fortunately reversed. Every improvement is heralded abroad and competitors are urged to adopt new methods. Imitation is here regarded as the sincerest form of flattery. It is with pleasure, therefore, that the ALBANY MEDICAL ANNALS notes the entrance into medical journalism of the *Washington Medical Annals*, which with true perspicacity has not only adopted the same name, but has assumed practically the same typographical appearance. The contents are of a high scientific character and this new journal bids fair to shed added lustre upon its prototype.

Empyema in Children

A striking difference exists between the pathogenesis of empyema of children and that of adults. This difference is so wide that to obtain a correct conception of their etiology it is necessary to study the one part from the other. Netter in Paris, and Koplik in New York, were among the first to clearly bring out the differences in the bacteriology and the comparatively mild symptoms and favorable prognosis of post-pneumonic empyema in children.

A recent and most excellent contribution to this subject has been made by Bythell. Forty cases in the Manchester Children's Hospital were studied clinically, but with special reference to the bacteriological aspects of the disease and it is along these lines that advance should be made. Ziemssen recommended a few years ago that a bacteriological examination of the pus be made in every case of empyema before deciding upon the method of treatment. In Bythell's investigations the pneumococcus was found alone in sixty-five per cent. of the cases and mixed in twenty-five, so that the pneumococcus was present in ninety per cent. of all cases. Streptococci were found in only five per cent. of all cases and tubercle bacilli in two of the forty cases or five per cent. These figures would be reversed in adults where streptococci and tubercle bacilli are the most frequent forms met with. The common occurrence of pneumococci in the empyema of children shows that the infection is derived in the great majority of cases from a pulmonary lesion by a process of direct invasion on the part of the micro-organisms. The pulmonary lesion in children is almost always a catarrhal pneumonia. The consequences of a pneumococci infection of the pleura are not in themselves very serious, although certain complications are liable to occur, but the prognosis can be regarded as favorable.

In Memoriam

GUSTAVUS W. POPE, M. D.

The death of Dr. Pope, one of the prominent alumni of the Albany Medical College, occurred at his home at Washington, D. C., July 21, 1902. Dr. Pope wrote a biographical sketch, presented in 1901, the semi-centenary of his class, from which it appeared that he was the historian, the sole survivor of the twenty-three members who graduated in 1851. He said of himself and his family:

"I was born in 1828, in Rome, Oneida County, N. Y. My father was Dr. G. W. Pope, Sr., an eminent physician of that place for fifty years. I studied medicine under him, graduated from the Albany Medical College in 1851, took a post-graduate course the next year at the medical department, New York University, and was appointed assistant physician to the New York State Lunatic Asylum in Utica in 1853. In 1856 I married and moved to Washington, D. C., and was the family physician to many members of the cabinet, also of the foreign legations from various European and South American countries, also of many senators and members all through the successive administrations from President Buchanan to Harrison. I also attended many officers' families and soldiers all through the Civil War, was the family physician to Secretaries Stanton, Dana and Watson, Senators Harris and Conklin, of New York, President Garfield and Secretary Blaine, and attended Colonel Rathbone, who was wounded by the assassin Booth when President Lincoln was shot by him. For the last five years I have been compelled to retire from practice in consequence of ill health. Col. Benjamin Frank Pope, my youngest brother, is also a graduate of the Albany Medical College at a later date. He was surgeon of one of the New York regiments all through the Civil War, at many military posts during the various administrations, surgeon of General Shafter's army in Cuba, and lately appointed chief of the entire medical and surgical department of the Philippine Islands. Our great-grandfather was captain of a Vermont company in the Revolution, was a schoolmate of Gen. Ethan Allen, was with him at the taking of Crown Point and Ticonderoga, was with Gen. Benedict Arnold at the forlorn attack on Quebec and with Generals St. Clair and Gates through nearly all the battles of the Revolution."

Dr. Pope espoused homœopathy, but retained his independence in matters relating to a strict observance. He was one of the best known physicians in the District of Columbia, and was the senior member of the staff of the Homœopathic Hospital at Washington. He was an author of more than ordinary merit, usually upon scientific subjects, and among other publications, had issued two books, entitled, respectively, "A Journey to Mars," and "A Journey to Venus." Before Mrs.

Pope's death, in 1895, their home in Washington was a rendezvous for lovers of science and music. Dr. Pope was a devout Catholic and greatly interested in his church. His brother, Dr. Benjamin F. Pope, of whom he wrote for the alumni reunion of 1901, had become an Assistant Surgeon General of the United States when his death occurred in February of the present year.

JOHN B. HARTWELL, M. D.

Dr. Hartwell, who graduated from the Albany Medical College in the Class of 1856, died at his home in Woodmere, N. Y., June 23, 1902.

JOHN THOMPSON, M. D.

Dr. John Thompson died in the Adirondacks, July 20, 1902, from a malignant attack of diphtheria. He was in the woods serving as a member of the commission appointed to formulate a plan to keep patients afflicted with or who had been exposed to smallpox from crossing the Canadian border into this state. Dr. Thompson was born at Athboy, County Meath, Ireland, December 10, 1837, and immigrated to this country in 1847. He was educated in the public schools of Binghamton, and graduated from the medical department of the University of the State of New York in 1866, and at once began the practice of his profession in this city. He had served as district physician, and had held office in the Medical Society of the County of Albany.

GRANVILLE S. THOMAS, M. D.

The death of Dr. Graville S. Thomas after a prolonged illness occurred July 11, 1902. Dr. Thomas was born November 13, 1834, and graduated from the Albany Medical College with the class of 1854. He resided and practiced in Chicago.]

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, JUNE, 1902

Deaths

	1901	1902		1901	1902
Consumption	25	14	**Apoplexy**	12	8
Typhoid fever	3	1	**Bright's disease**	11	5
Scarlet fever	1	0	**Cancer**	13	6
Smallpox	0	2	**Accidents and violence**	9	6
Pneumonia	2	3	**Seventy years and over**	19	19
Broncho-Pneumonia	3	4	**One year and under**	14	13

DEATHS IN INSTITUTIONS

	1901	1902
Albany City Hospital	15	10
County House	2	5
Homeopathic Hospital	4	3
Hospital for Incurables	2	1
Smallpox Hospital	0	2
House of Shelter	0	2

Total number of deaths	102
Deaths less non-residents dying in institutions	91
Death rate for June, 1902	11.16
Death rate less non-residents	9.96
Deaths during June, 1901	148
Death rate for June, 1901	15.87
Births 105 *Marriages*	104

The extremely low death rate of the city, for this month, is to be noticed. It is the lowest on record in the Department. The non-resident death rate of 9.96 places the City of Albany among the most healthful cities of the State.

WORK OF HEALTH PHYSICIANS

Total number of assignments to health physicians	66
Total number of calls made	374
Number of vaccinations	268

INSPECTIONS

During the month there were seventeen privies inspected and condemned, sixteen closets, eight drains inspected, eleven plumbing nuisances, three wells and cistern nuisances, four filthy yards, two filthy alleys, two filthy cellars, twenty-two filthy premises inspected, nine manure nuisances and one chicken nuisance. Seventy-three nuisances were found on re-inspection to be abated and fourteen were found to be no cause for complaint.

Among the plumbing inspection there were 166 old buildings and eighty-six for new buildings, sixty-two iron drains were laid, forty-five connections with street sewers, fifty-eight tile drains, one cellar drain, two urinals, fifty-nine cesspools, forty-eight wash basins, fifty-four sinks, thirty bath tubs, twenty-four wash trays, seventeen trap hoppers in yard, seventy-one tank closets, one stable wash stand, and one horse trough. There were 146 permits issued, of which ninety-nine were for plumbing purposes and forty-seven for building purposes. There were twenty-two plans submitted, of which five were for old buildings and seventeen for new buildings.

Bender Laboratory Report on Diphtheria Tests

Initial positive.	Initial negative.	Release positive	Release negative.
15	19	25	11

Spoiled..............2

Total number of cultures..............72

Contagious Disease Report

Typhoid fever reported	2	4
Scarlet fever reported	8	14
Diphtheria and croup	27	22
Chicken-pox	3	38
Measles	58	25
Consumption	1	1

Number of houses fumigated..77 Number of Rooms fumigated..263

Number of days quarantined for diphtheria:
Longest.......36 Shortest.......14 Average.......24
Number of days quarantined for scarlet fever:
Longest.......19 Shortest.......19 Average.......19

It is expected that at the time of the publication of this number of the Annals, the city will be free from small-pox. At this writing there are no cases quarantined by the police in the city, and less than ten convalescent cases in the Smallpox Hospital. It is believed that the present infection is practically at an end. About nine thousand vaccinations have been made by the Department of Health since the middle of April, and a little later, the Health Officer will again ask for the return of the number of vaccinations made by the profession, on postal cards. In this way a pretty close estimate of the total number of vaccinations made in the city, during the past three months, can be made. Last year there were certainly fifteen thousand vaccinations made, and this year, at least another fifteen thousand vaccinations, but the exact figures will be presented to the profession later, as well as a complete statement of the smallpox situation.

SMALLPOX AND VACCINATION

New York Medical Record, November 9, 1901

The outbreak of smallpox on a somewhat large scale in London has, in the natural order of things, once again brought forth bitter denunciations of vaccination and its upholders. The antivaccinationists are, as usual, profuse in language and vehement, but loose in argument, and endeavor to depreciate the value of Jenner's discovery by declaring that the decrease of smallpox is due to improved sanitation. That the disease should have diminished both in prevalence and severity since the introduction of vaccination they profess to regard merely as a coincidence. So much has been written upon the subject of vaccination that it would be a wearisome and unnecessary task to reiterate even some of the conclusions definitely arrived at with regard to its benefits.

The *London Saturday Review*, October 5th, has an especially acute criticism of the attitude of the scoffers and one or two opposite points are exceedingly well put.

The writer of the article remarks that the details of a complex problem, involving the delicate interplay of activities of life, the attractions and repulsions of contending cells, the production and warfare of toxins and antitoxins, the nature of microbes and microbial poisons, lie in a region closed and unprofitable to a layman. A special aptitude, a long training and a constant and assiduous devotion are requisites of the modern bacteriologist, and it is only the bacteriologist who is in a position even to understand the evidence that has accumulated regarding the artificial reduction of relative or complete immunity to a disease. And this is the more so because the production of immunity by vaccination for long and isolated empirical result, hit upon by what may be called a happy chance, and its inception out of line with what was known of disease, has now, by the vast growth of knowledge, taken its place as one particular problem exactly congruous with the problems raised by study of the vast majority of diseases. Had Jenner not existed, were smallpox a new plague, suddenly brought to Europe from some remote part of the earth, modern bacteriologists, from their knowledge of their diseases, would be seeking for some means of producing immunity much on the lines of Jenner's empirical solution. The scientific discussion of vaccination, as a biological process, must be life to biologists, and in particular to those biologists who make pathological bacteriology their special subject.

The truth undoubtedly is that the ordinary individual has not the trained intelligence necessary to understand more than the rudiments of the matter, and is consequently precluded from passing an opinion of any value. The opponents of vaccination are, for the most part, incapable, through their ignorance of bacteriological science of judging of the merits or demerits of the method; but led away by their emotions, they play upon the feelings of the masses and create a prejudice against vaccination in the same way as they, or their like, have stirred up an adverse sentiment against every form of medical study and investigation.

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY—MEMORIAL MEETING—JOHN THOMPSON, M. D.

A special meeting was held in Alumni Hall, Thursday, July 25, 1902, at 5 P. M., Vice-President Boyd in the chair. There were present Drs. Ball, Boyd, Cook, Hale, Lanaham, Mosher, Murray, O'Leary, Tucker and E. A. Vander Veer.

On motion of Dr. TUCKER, Dr. MOSHER was chosen Secretary, *pro tem.*

Dr. BOYD then stated the object of the meeting as a tribute to the late Dr. John Thompson, a member of the Society, who died on July 21st, and read the following letter:

JAS. P. BOYD, M. D., City

My dear doctor:—I regret exceedingly that it will not be possible for me to attend the special meeting of the County Medical Society to-morrow, to take action in reference to the death of Dr. John Thompson. I should like to be present and contribute my testimony of respect to his memory. Dr. Thompson was a man modest and retiring in his manner, but possessed of many noble qualities. He had a very high and honorable respect for his profession; his bearing was that of a true gentleman, in attendance upon our meetings, and his remarks were clear, intelligent and to the point, in reference to the subjects he discussed at various times. He was brave in his exposure of himself to all forms of contagious disease, and never shrank from doing what he believed to be his duty. He filled his sphere in his profession, and in the discharge of his duty, in an honorable, upright manner. We will miss him in our gatherings, and I for one wish to offer my appreciation of his worth and well doing in this life.

Sincerely yours,

A. VANDER VEER.

Dr. O'LEARY moved that a committee of three be appointed to prepare a suitable record for the minutes of the Society to the memory of Dr. Thompson. The motion was seconded by Dr. MURRAY, and Vice-President Boyd appointed as such committee Drs. O'LEARY, COOK and MURRAY.

Dr. O'LEARY moved that the committee be given time to draft the memorial minute, and to report at a future meeting of the Society, which was adopted.

Remarks upon the life and work of Dr. Thompson were made by Drs. O'LEARY, COOK and LORENZO HALE.

The meeting then adjourned.

J. M. MOSHER, *Secretary pro tem.*

JAMES P. BOYD, *Vice-President.*

Medical News

Edited by H. Judson Lipes, M. D.

The Albany Hospital for Incurables.—The architect for the new Hospital for Incurables, Mr. William L. Woollett, has the specifications for the central building ready and citizens are requested to send their contributions at once to any trustee or to 390 Madison Avenue, so that the present occupants of the old and very uncomfortable hospital may be removed to more healthful and more pleasant surroundings before cold weather sets in.

The Albany College of Pharmacy.—The catalogue of the Albany College of Pharmacy, Department of Pharmacy, Union University, has recently been issued. This catalogue is a decided improvement on the former editions and is very attractive in appearance. Besides the usual register of students and announcements for the session of 1902-1903, the catalogue contains the list of the Alumni and officers of the Alumni Association of the College of Pharmacy. According to the Calendar for 1902-1903, the Introductory lecture will be given Monday, October 6th, when the college is formally opened.

The Albany Medical College: Annual Announcement.—The Catalogue of the Albany Medical College for the 71st Session, 1901-1902, and the Announcement for the Session of 1902-1903, has recently appeared. There are several changes noted in the Faculty. Dr. Joseph Davis Craig has been made Professor of Anatomy and Curator of the Museum. Professor Samuel Roseburgh Morrow, formerly Professor of Anatomy and of Orthopedic Surgery has been appointed Professor of the Practice of Surgery and of Orthopedic Surgery. Dr. Willis Goss Macdonald, formerly Adjunct Professor of Surgery, is now the Professor of Abdominal and Clinical Surgery. Dr. George Blumer, Director of the Bender Hygienic Laboratory and formerly Adjunct Professor, has been promoted to the full Professorship of Pathology and Bacteriology.

The following lecturers have been appointed: Dr. Arthur Turner Laird, Clinical Microscopy; Theodore James Bradley, Ph. G., Inorganic Chemistry; Dr. Spencer Lyman Dawes, Materia Medica, and Instructor in Theory and Practice of Medicine. To the list of instructors have been added: Dr. Christian Gottlieb Hacker, Materia Medica and Therapeutics; Dr. Harry Wardell Carey, Histology; Dr. Harris Moak, Pathology.

The regular winter session of the Medical College opens Tuesday, September 23, 1902. A marked advance in practical teaching has been effected by the increase of clinical bedside instruction in the fourth year. Four days each week are given to section work, which includes every department of practice in medicine, surgery and specialties.

The Albany Hospital Association of Graduate Internes.—The Albany Hospital Association of Graduate Internes was organized June 29, 1902, at a meeting of a number of physicians who have served the requisite time as resident physicians and surgeons in the Albany Hospital.

There are sixty or seventy physicians who are eligible to membership in this association, and it is expected that most of them will become identified with the organization. The meeting was held in Alumni Hall of the Albany Medical College. The name was adopted and Drs. Leo. H. Neuman and William H. Happel were appointed a committee to draft a constitution and by-laws.

The following, as previously announced in the ANNALS, were elected officers for the first year of the association's existence: President, Dr. C. B. Herrick, of Troy; vice-president, Dr. G. E. Lochner, of Albany; secretary and treasurer, Dr. Walter Conly, of Albany.

The members who attended the meeting yesterday will be looked on as charter members, and in the future all candidates will have to be elected to membership. To be eligible for membership one must have a certificate of one year's service, at least, in the Albany Hospital as a resident physician and surgeon. The ultimate purpose of the organization of this association is to form other similar associations in various cities of this state and to organize a State Association and finally a National Association of Hospital Internes. In New York City there are several hospital interne associations, but no organized effort has ever been made to make the association a general one with the various branches affiliated in central, state and national bodies. The Albany Hospital Association will hold two meetings each year, the first during the last week in January, when the State Medical Society is in session in Albany, and the second, the annual meeting on alumni day of the Albany Medical College.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR: STATISTICS FOR JUNE, 1902.—Number of new cases reported to the Guild, 52. *Classification of cases:* District cases reported by health physicians, 5; charity cases reported by other physicians, 19; moderate income patients, 28. *Classification of diseases:* Medical, 12; gynecological, 38; dental, 2. Removal to hospital, 3; died, 2.

Visits of Guild Nurses: Number of visits with nursing treatment, 652; for professional supervision of convalescents, 222; total, 874. Cases were reported to the Guild by the city physician, by two of the health physicians and by 14 other physicians. Dentists, 2.

Special Obstetrical Department: Head Obstetrician in charge of cases. Medical students in attendance, 3; graduate nurses, 3; patients, 2. Number of visits by obstetrician, 6; by the medical students, 19; by the Guild nurses, 22. Total for the month, 47. Three patients on the waiting list.

The Guild has announced the appointement of Miss Winn as acting head nurse. All cases should now be referred directly to Miss Winn, either by telephone—1802*a* Chapel—or by using the address of the Guild flat, No. 2 Delaware Ave.

PERSONAL NOTICE.—VOGEL AND KREIENBRINK, Medical Publishers and Dealers, have recently removed from Südende to Berlin, S. W., Dessauerstr., 25, Germany, where they will be pleased to serve their patrons.

—THE T. W. NELLIS DRUG AND PHYSICIANS' SUPPLY COMPANY announce that the business lately conducted by Dr. T. W. Nellis, deceased, will be continued as before his death at 75 State Street. The truss-fitting department will be in competent and experienced hands and every effort will be made to give the same satisfaction to their patrons as when under the personal supervision of Dr. Nellis.

PERSONAL.—Dr. HUGH M. COX (A. M. C., 1902), of Port Jervis, and Dr. FRANK M. SULZMAN (A. M. C., 1902), of Waterford, have been appointed internes at the Troy Hospital after a competitive examination.

—Dr. WILLIAM KIRK, Jr. (A. M. C., 1899), has removed from 1811 Fifth Avenue to 2655 Fifth Avenue, Troy, N. Y.

—Dr. CLINTON B. HERRICK (A. M. C., 1880), is now located at 40 State Street, Troy, N. Y.

—Dr. C. H. TRAVELL (A. M. C., 1894), has removed from 14 Fourth Street to 1915 Fifth Avenue, Troy, N. Y. Dr. Travell has also opened an office at 196 Lark Street, Albany, N. Y.

—Dr. J. G. W. ENSTWISTLE (A. M. C., 1883), formerly of 6336 Harvard Street, has removed to 759 63rd Street, Englewood Station, Chicago, Ill.

—Dr. WILLIAM ANSON BLISS (A. M. C., 1862), is at 350 Eleventh Street, Brooklyn, N. Y.

—Dr. M. J. O'REILLY (A. M. C., 1874), has removed from Kingston, N. Y., to Fishkill-on-the-Hudson, N. Y.

—Dr. JOHN N. BRADLEY (A. M. C., 1875), has removed from Westerlo, N. Y., to Berne, N. Y.

—Dr. EDWARD L. JOHNSON (A. M. C., 1891), formerly of Schoharie, N. Y., has removed his office to 230 North Garey Avenue, Pomona, Cal.

—Dr. EARL W. WILCOX (A. M. C., 1894), has removed to Norwich, Chenango County, N. Y.

—Dr. ADELARD LAURION (A. M. C., 1895), formerly of Great Falls, N. H., has removed to New Bedford, Mass.

—Dr. EARL H. JACKSON (A. M. C., 1902), has begun practice at Crane Street, Mount Pleasant, Schoharie County, N. Y.

—Dr. STILLMAN S. HAM (A. M. C., 1902), has begun practice at 243 Liberty Street, Schenectady, N. Y.

—Dr. THOMAS CARNEY, (A. M. C., 1902), has begun practice at 506 State Street, Schenectady, N. Y.

Book Reviews

The Neuroses of the Genito-Urinary System in the Male, with Sterility and Impotence. By Dr. R. ULTZMANN, Professor of Genito-Urinary Diseases in the University of Vienna. Second Edition. Revised, with Notes and a Supplementary Article on Nervous Impotence, by the Translator, GARDNER W. ALLEN, M. D., Surgeon in the Genito-Urinary Department of the Boston Dispensary; Instructor in Genito-Urinary Surgery in Tuft's Medical College. Illustrated. Pages 198. 12mo. Price, extra cloth, $1.00, net, delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

This small volume treats of conditions which too often are left to charletans and quacks simply because the physician neglects to inform himself of their importance and of what he can legitimately accomplish.

In the first chapter the condition of the urine of these cases is described. Then follows the classification of the neuroses of the urinary and sexual systems and their consideration. The author strongly lays stress upon the general nervous condition in these cases and urges the toning up of the entire nervous system. The serious results which may follow catheterization are emphasized and the author seems to lay more stress upon the negative fluctuation than upon infection.

A Manual of Clinical Laboratory Methods. By JOHN BENJAMIN NICHOLS M. D., in charge of Clinical Laboratory, Garfield Hospital; Hæmatologist to Columbian University Hospital; Professor of Normal Histology in Medical Department of Columbian University, Washington, D. C. Illustrated. New York: William Wood & Company, 1902.

The author states in his prefatory note that this work does not profess to present much that is new or original, but that it is a collection of numerous technical procedures within small compass, and that it treats of established methods. The field covered is a large one, including the examination of blood, stomach contents, feces, urine and various secretions. Clinical bacteriology and the conduct of autopsies are also discussed. The usual tests are given, and to one limited to a single work for laboratory reference the book will undoubtedly prove valuable. Some of the more recent laboratory conveniences are not mentioned, as the use of slides in routine bacteriological and blood work instead of cover-slips. Jenner's stain and the various methods for demonstrating chromatin are not referred to. Dare's hæmoglobinometer is not mentioned. In discussing the Widal test for typhoid fever the author makes the following statement: "The motility of the bacilli is greater the lower the temperature at which they are grown; the culture should be kept, therefore, at the lowest temperature at which a sufficiently profuse growth can be obtained within the requisite time." In using the dried blood method the author says that the dilutions can only be approximately correct, and the degree of dilution obtained is merely a matter of judgment. He does not mention the help which the color of diluted blood affords. In connection with the examination of sputum the suggestion is made that by placing sputum in an oven of 37 degrees C. for a day or two the bacilli may increase in number so as to be more easily found. Several methods are given for the determination of urea in the examination of urine—one of them with a ureometer devised by the author, which appears to be a useful instrument. Under the head of the examination of milk, methods for determining the amount of fat, proteids and lactose are given, but there is no discussion of methods of counting the bacteria, and thus determining the purity of the milk. Various parasites are discussed in a separate chapter.

As a whole the book is to be commended, though many workers will prefer to use separate books on the blood and bacteriology, and the other subjects considered. A. T. L.

The Perverts. By WILLIAM LEE HOWARD, M. D. G. W. Dillingham Company, Publishers, New York.

This is an extraordinary book, introduced by the bar sinister, and permeated by a moral. The object of the author is the vitalization of degeneracy, by weaving into characters of fiction experiences from his practice. He thus produces a marvelous lot of people, presenting many forms of moral deterioration, the tendencies of which are resisted only in the case of his hero. The others pass through different stages of crime and insanity, the most pronounced instance being that of the young woman in whom is combined intense religious erethism with the heartless enjoyment of the suffering of others. She is at last overwhelmed in the results of her own ill-doing, and dies a tragic death. There is enough movement in the book to attract readers, and it is possible that some inkling of the psychological problems involved may reach the average layman. At any rate the author has brought an abstract proposition to the level of ordinary experience, and in time the science of penology may feel the effect.

Quain's Dictionary of Medicine. By Various Writers. Third Edition, Largely Rewritten and Revised Throughout. With Fourteen Colored Plates and Numerous Other Illustrations. Edited by H. MONTAGUE MURRAY, M. D., F. R. C. P., Joint Lecturer on Medicine, Charing Cross Medical School and Physician to Out-Patients, Charing Cross Hospital; Senior Physician to the Victoria Hospital for Children, Chelsea, and to the Foundling Hospital. Assisted by JOHN HAROLD, M. B., B. Ch., B. A. O., Physician to St. John's and St. Elizabeth's Hospital, and Demonstrator of Medicine at Charing Cross Medical School; and W. CECIL BOSANQUET, M. A., M. D., M. R. C. P., Physician to Out-Patients, Victoria Hospital for Children, Chelsea, and Pathologist to Charing Cross Hospital; Late Fellow of New College, Oxford. New York: D. Appleton & Company, 1902.

Quain's Dictionary is so universally adopted that a description is hardly necessary. It may be said of it that the difficult literary task of compression, conciseness and correctness has been very well done, and that the facts have been stated and the theories omitted, of all the important subjects of medicine and surgery. The names of 284 contributors are given, including the best known authorities of two continents. The illustrations are well selected and the full-page plates are particularly modern and appropriate. These include, among others, pathological and bacteriological plates and, also, the painful areas in visceral disease outlined by Head. The book is a valuable one and should be found in every medical library.

Current Medical Literature

MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

Rational Treatment of Pulmonary Tuberculosis and Nebulizations by Means of Bactericidal Inhalations and the Hydro-Electric Bath. (Traitement rationnel de la tuberculose pulmonaire et nebulisations au moyen d'inhalations bactericides et du bain hydro-électrique.) ANTONIO MAGGIORAN. *Les Progres Médical, 29 June, 1901.*

The author has for many years practiced inhalation with his patients having pulmonary tuberculosis; also nebulization and insufflation of powders, among which iodine figures as the principal remedy, since it is the chief destroyer of the tubercular bacillus, provided it be placed almost in contact with that bacillus—which surgery has clearly demonstrated—and he has given hydro-electric baths.

In treating pulmonary tuberculosis, confidence is not to be placed solely in one remedy; recourse must be had to systematic treatment which, after having deprived the bacilli of their virulence, can expel the toxines, cicatrize the corrosions of the bacilli and reconstitute the organism which has been so shattered by so grave a disease, during whose progress the organic exchange is absolutely defective.

Dr. Maggiorani had had, in 1896, patients who had been declared, by distinguished colleagues, to be incurable, who have been cured by bactericidal inhalations and other remedies, and who are still enjoying good health. Some of these cases were shown to the Congress of Internal Medicine that was held at Rome in 1896.

Seeing that the first cures were lasting, he repeated the same treatment in 1900, at the Hospital of Santo Spirito in Sassia, of Rome, where, naturally, in the tuberculous wards, conditions for such treatment were unfavorable. He selected this hospital because it was on low ground. Several patients whom he treated there have been cured; in their cases traces of pulmonary cicatrization can be detected by a certain degree of what he terms *hypophonèse,* in the parts formerly affected; their lack of respiration is compensated by the other parts of the lung doing slightly more than their share. He says he would not dare pronounce them cured, six months after their dismissal from the hospital, had he not other patients of the same kind who had remained well five years. Some of these patients are acting as nurses. Before letting them resume or undertake nursing, after the treatment, they were withdrawn from the hospital until their general strength was made as good as possible.

His plan is, first of all, to simplify the infectious disease by depriving the bacilli of their virulence and expelling the toxines; then to cicatrize the lesions caused by Koch's bacillus and, finally strengthen the organism by the re-establishment of the equilibrium of exchange, which is lost in tuberculous subjects. The first is done by inhalations in which iodine, formaldehyde and mint predominate, some chloroform being added as a bactericide and sedative and to deprive the formaldehyde of its property of irritating the mucous membrance. Those patients whose disease affects the larynx have insufflations of iodized powders and all of them use nebulizations of iodized waters. Those patients who have followed this course of treatment regularly and perseveringly, inhaling air through the author's inhaler, four or five hours a day, which involves no fatigue, come to have fewer bacilli in the sputa and all the symptoms diminish until the bacilli have quite disappeared, which sometimes happens very soon, in other cases needs a month or six weeks.

Using the most accredited means of clinical observation, the author has proved that, with twenty to thirty baths, taken alternate days, averaging eleven minutes at a time, in tepid water, the tuberculous paients showed: *Augmentation*—of the appetite, of body weight, digestive power, hemoglobin, muscular strength, peripheral warmth, acidity of the urine and diamagntism of the blood and of the urine. They showed *Diminution*—of frequence of the heart-beats, of respiration, sensitiveness to heat and pain, diminution and prompt cessation of rheumatic and non-rheumatic *formes* of night-sweats. They showed correction of genital asthenia, in cases in which it had existed, and amelioration of vital power with patients of an advanced age. These conclusions are drawn :

With antibacillary inhalations and nebulizations, pulmonary tuberculosis may be simplified, provided one does not wait till the tuberculous cachexia is present before undertaking treatment.

The toxines may be expelled and the ravages of the bacilli repaired, when these ravages do not embrace so great a part of the lungs that they cannot be compensated by some extra work by the healthy parts, thus providing the oxidation of the blood.

Tuberculosis having been overcome, the patient is not cured till the organism has been reconstituted by the restoration to the normal state of its exchange.

This result can be attained in sanatoriums at the seashore or in the lowlands, and even at home, by using a means which takes the place of the stimulation of the organic functions provided by the pure, fresh elastic air of high mountains, by the stimulation of electricity applied to all the surface of the body by means of the hydro-electric bath; this means being adopted likewise in the mountains, to replace hydrotherapy, frictions and massage, since such baths have the same qualities, only that they are united and condensed in one procedure.

NEUROLOGY

Edited by Henry Hun, M. D.

The Nervous Consequences of Railroad Accidents. (Ueber die nervösen Folgezustände nach Eisenbahnunfällen.)

ALFRED SÆNGER. *Monatsschrift für Psychiatrie und Neurologie, September, 1901, Band X, Heft 3.*

The writer reviews the different theories regarding the condition of the nervous system after railway accidents from the time of Erichsen's "railway spine" to that of Oppenheim's "traumatic neurosis," and recalls a contribution by himself in 1896, in which he urged the abandonment of the term "traumatic neurosis," because the effect upon the nervous system of an injury presents no persistent or pathognomonic character, but is essentially individual. From the opportunity given by two railway accidents in 1897 and 1899 respectively he has been able to observe over a space of time the effects of the injuries received, and especially with reference to two points: first, the nervous disturbances excited in working men who have sustained an injury; and, secondly, the differences between these effects in working men and in the better classes.

In thirty-four persons who were injured in the two accidents cited, apart from three who were killed, not one presented the symptoms of the "traumatic neurosis" in Oppenheim's sense. Of thirteen cases of the first accident, six were absolutely free from bad results; four had light neurasthenic symptoms, slept more irregularly than before, complained of occasional headaches, and fretfulness; two boys appeared to have lost intelligence to some degree, and one patient suffered in memory. In three employees, who suffered no severe injury, outspoken hysterical symptoms developed, in one of whom pronounced neurasthenia continued for two years. In two locomotive engineers with severe injuries marked mental irritability disappeared after a few weeks, and only sleep was disturbed. In one switchman neurasthenia ensued through anxiety and without any traumatism. In one brakeman severe neurasthenia appeared only during occupation.

From this it appears that the nervous consequences of severe railway accidents do not offer so bad prognosis as has been assumed. Above all it is quite noticeable that the results are much more pronounced in railway employees than in private individuals. This is shown by the cases in which nervous symptoms developed, where no bodily injury had been sustained. The anxious service, the generally diminished and irregular sleep, the dread of disciplinary correction, the exacting answerability, predispose to nervous disease. In addition to these are often hereditary taint, which is not seldom accompanied by abuse of alcohol and tobacco, under-feeding, early syphilis, all of which tend to the development of arterio-sclerosis. Finally comes the dread of retirement from active work with insufficient compensation and a moderate pension.

From these considerations the writer concludes that the "individuality" has much the most to do with the form and severity of the functional nervous conditions which follow accidents; and, furthermore this "individuality" must be considered in its widest and most comprehensive sense. Not only the individual personality, but also the individual conditions before, at the time of, and following the accident must be taken into account.

In the estimation of the individual case, must be taken into account the personal constitution, the inherited predisposition to disease of the nervous system, preceding diseases, abuse of alcohol and tobacco, the social conditions, the financial state, the occupation, and the probable injurious effects of all these factors. Finally due weight must be given to the general situation of the victim at the time the injury was sustained.

BACTERIOLOGY AND HYGIENE

Edited by August Jerome Lartigau, M. D.

Concerning Infection from the Uninjured Conjunctival Sac. (Ueber die Infektion vom unverletzten Bindehautsacke aus.)

K. Hirota. *Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten, Band XXXI, No.* 6, 1902.

In this article Hirota discusses the possibility of general infection taking place through the conjunctival sac, and records a series of experiments upon animals which he made to determine the possibility of infection from the conjunctiva and the route by which it took place. He experimented on a large number of animals, especially rabbits, guinea-pigs, white mice and white rats. The material to be tested was injected under proper precautions as to asepsis, and care was taken not to introduce any foreign matter with the cultures. The experiments were made particularly with chicken cholera, mouse septicæmia, anthrax and the pneumococcus of Frænkel. As a result of his experiments he was able to make out that following the introduction of the bacillus of mouse septicæmia, the bacillus of chicken cholera and the pneumococcus into the uninjured conjunctival sac a fatal general infection sometimes followed. With the anthrax bacillus this occurred so seldom that he was in doubt regarding it.

He then discusses the question whether the infection actually takes place through the conjunctival sac, or whether it takes place by the bacteria being carried into the nose and throat through the lachrymal duct. He cites the experiments of Römer, who showed by tying off the tear duct that the infection with mouse septicæmia and chicken cholera did not occur. Römer concluded that the infection in these cases take place particularly from the nasal cavities, probably from the throat too in some cases.

Hirota from a series of similar experiments came to similar conclusions. This led him to investigate as to the mechanism leading to the removal of micro-organisms from the conjunctival sac. He found that the chemical action of the tears had but little effect, but that the mechanical washing, together with the movements of the lids, removed bacteria from the conjunctival sac very rapidly.

He, therefore, finally concludes that general infection does not take place from the uninjured conjunctival sac, but when this appears to take place it is due to the fact that bacteria are absorbed from the nasal cavities after having passed down the tear duct.

Virulent Diphtheria Bacilli in Simple Rhinitis. (Virulente Diphtheriebacillen bei einfacher Rhinitis.)

R. O. Neumann. *Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten, Bd. XXXI, No. 2, 1902.*

Neumann discusses the question of the forms under which diphtheria of the nasal passages appears. He points out that most writers classify nasal diphtheria into primary nasal diphtheria and rhinitis fibrinosa.

Primary nasal diphtheria is said to be extremely rare. According to the statistics of Welch it occurred only four times in 6,156 cases. Rhinitis fibrinosa is much more often observed, and is perfectly easy of recognition.

The author calls attention to a number of cases which he has observed in which apparently simple coryza was due to the diphtheria bacillus. In many instances the general symptoms produced were more marked than those of a simple coryza, but very much less marked than in an ordinary case of diphtheria. The discharge from the nose was sometimes seropurulent, sometimes markedly purulent. The author comes to the following conclusions from his study:

Simple rhinitis, associated with virulent diphtheria bacilli, is much more frequent than is commonly supposed. The symptoms of this disease are not always the same. It comes on very often in a very mild form and may even be unobserved by the patient. It is quite in contrast with the so-called rhinitis fibrinosa as there is no formation of membrane. Both forms exist upon a similar basis, so that one should not speak of them as two different diseases, but they should be divided into nasal diphtheria with membrane formation, and nasal diphtheria without membrane formation.

Considering that not only rhinitis fibrinosa, but also nasal diphtheria, especially the last, are points of contagion for the surrounding neighborhood, it would be wise to investigate bacteriologically all doubtful cases of coryza.

Concerning the Behavior of Typhoid Bacilli in Earth (Ueber das Verhalten des in Erdboden eingesäten Typhus bacillus).

W. Rullmann. *Centralblatt für Bakteriologie, Bd XXX, No.* 8, 1901.

Rullmann's work consisted in the inoculation of soil with typhoid bacilli, and the testing of the inoculated soil at stated intervals to find out how long the bacilli could remain alive. For his work he used sterilized soil, and also unsterilized soil, the latter being either garden mould or red river sand. He kept the soil moist with various substances, sometimes he used sterile water, at other times sterile urine, sterile blood serum, or sterile vegetable decoctions. The soil was kept at room temperature, generally in diffuse daylight. His work is similar to that done previously by Martin and by Robertson. Rullmann seems, however, to have taken larger quantities of soil in making his late tests. His conclusions relate to various points. He shows that the typhoid bacilli when inoculated in a circumscribed area of soil spread through the soil to a considerable degree. Under some circumstances the typhoid bacillus could be recovered as long as sixteen months after infection of the soil. This was usually in tests where the soil was sterilized, but even in unsterilized soil typhoid bacilli could be isolated after one hundred days. Where typhoid bacilli could be isolated from unsterilized soil, it was generally found that this had not been invaded to any large extent by other organisms.

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ALBANY MEDICAL ANNALS

Original Communications

For the Annals.

PERSISTENT HICCOUGH.

By WILLIAM McDONALD, A. M,, M. D.,
Assistant Physician, Butler Hospital, Providence, R. I.

The beginning of the new century of medicine suggests the appropriateness of a retrospect of the past one hundred years, with special attention to evidences of progress. In such a survey we note many subjects in which the advance has been so marked as to be startling, and yet others in which we must admit that the total of our absolute knowledge is scarcely greater than that owned by our predecessors of a hundred or mayhap, in a few cases, many hundred years ago. The conditions at present, however, in pursuing knowledge are far more favorable than those of any period in the history of medicine. Henceforth less time will be wasted in conducting investigations of which there is not at least a fair promise of arriving at a definite conclusion. We will not so often confound the symptom wth the disease, nor attribute the outcome to the effect of chance remedies. Concomitance will not mean cause. Proof will mean more evidence. In short, in the profession of medicine we are fast learning the scientific attitude.

These conclusions find ready adaptability in the consideration of the very narrow medical unit, which is the subject of this paper.

Having had occasion recently to make a rapid survey of the literature on this subject I was surprised to find a rather large collection of data. Apparently, earlier medical men found it more frequently of interest than we of the present day. As early as 1624, (Mayr), 1656, (Kislingius), 1659, (Sebezius), and 1667, (G. C. Hübnerus), it attracted attention. The earlier periodicals of the present century contain numerous references to the phenomenon. After examining these writings one must admit that we possess very little knowledge beyond that of the authors. In the *Edinburgh Medical and Surgical Journal*, 1833, Thomas Shortt, M. D., F. R. S. E., wrote an article on hiccough of such value that a writer as recently as 1895, acknowledging his indebtedness to Shortt for his outline, proceeds to follow his order almost word for word. Indeed, as indicated, we can scarcely say that our knowledge is more definite than that of Shortt. Our attitude, however, is distinctly more favorable for the acquisition of exact knowledge than was his sixty-nine years ago. The field has been cleared of refuse and we are ready for action at the proper moment. Such considerations, for instance, as occupy his opening paragraphs can scarely absorb much of our time or interest. I refer to the review of the evidence in favor of Lieutaud and Sauvages, who regarded hiccough as an idiopathic disease as opposed to the evidence on the side of Cullen, who regarded it ever as a symptom. Dr. Shortt finally exhibits the weakness of his own position by admitting that both were right, though its occurrence as an idiopathic disease might be rare. To-day our position is stated in few words. We will consider the right of hiccough to be classed as an idiopathic disease, when we are presented with data of sufficient value to warrant discussion. Up to the present time we have never seen, heard nor read of a case in which there was a particle of evidence that the phenomenon was other than a symptom.

Nature of the Action. The essential feature is sudden involuntary contraction of the diaphragm. Simultaneously there is a closure of the glottis, inspired air coming forcibly against the vocal cords with the production of the characteristic sound which gives the action its name. Shortt says that it is a "sudden, rapid and brief inspiration in which the stomach and diaphragm are drawn upwards." This is manifestly incorrect, for in inspiration the tendency is for the diaphragm to flatten with a lowering of the dome and underlying viscera. In Quain's Dictionary is suggested that the accompanying sound may be accounted for without admitting the necessity of spasm of the glottis, and that sudden contraction of the diaphragm with swift rush of air upon vocal cords not sufficiently separated might produce the sound.

Etiology. The greatest confusion is evident in most of the literature considering the causes of singultus. This confusion is probably due to the effort to attribute all cases to one cause, or to locate the irritation in every instance at the same point on the phrenic nerve or its connections. We constantly find the probable cause overlooked while an enormous number of ills are mentioned by various authors as exhibiting special liability to complication with hiccough.

As to the predisposing conditions we can say that any case in which there is increased general nervous irritability might be easily complicated by more or less persistent hicough; that any local disorder which might extend to or become contingent upon any portion of the phrenic, its centres, or immediately related afferent nerves such as the gastric branches of the vagus, may be said to offer special liability; that abnormal conditions in certain distant parts may constitute a predisposition by reason of the possibility of reflex action, from impulses carried over related systems of nerves; finally that, inasmuch as every reflex act prepares the way for its own repetition and that nerve force expends its energy along paths of least resistance, each attack intensifies the predisposition. This last fact possibly explains a number of reported cases in which the attacks occurred again and again, more and more frequently, till one terminated in the death of the victim.

Of the general conditions of hyperexcitability, hysteria and neurasthenia occur to the mind most readily whether the latter be from overwork, intemperance, excesses or what not.

Of the local predisposing causes the commonest examples are pre-existing inflammations of the pleura or peritoneum. Of those acting reflexly, diseases of the organs of generation and digestion probably make up a large number. We can conceive that an altered or abnormal condition of the sexual function might offer a predisposition in two ways, one through a general heightened nervous irritability from excesses or difficulties, and reflexly from continued congestion of the organs of generation.

In regard to the time of life, it is said to occur most frequently in childhood and old age; as to sex, it is most common in the female.

The admission to Butler Hospital of a patient suffering from hiccough was the origin of our recent interest in the subject, and while this one case does not justify general conclusions it may serve as an illustration in the study and comparison of others. The case will not be reported as a whole but only certain features of it, as the occasion may warrant, as examples of the particular phase under discussion.

In our patient, whom we shall henceforth, for brevity, designate as Mrs. Z., several of the above mentioned conditions may have occasioned a predisposition. She had been married but two months during which sexual excesses increased a pre-existing nervous excitability caused by previously suppressed sexual appetite. Moreover she suffered from dysmenorrhea accompanying an anteflexed uterus.

The exciting causes are of great variety. According to Foster (Textbook of Physiology) the afferent impulses of the reflex are conveyed by the gastric branches of the vagus. Theoretically, at least, we should expect that given irritation along the course of either afferent or efferent nerves, including chief and ganglionic centres, might produce diaphragmatic spasm, in one case reflexly and in the other directly. Indeed we find that such a view is largely sustained by the clinical facts, there being an enormous number of different conditions reported as etiological.

Illustrating central irritation, such as might arise from organic or inorganic toxic substances in the blood current we read of many attacks occurring in malaria and terminating with the cure of the disease. Also in gout or rheumatism the hiccough was coincident with the pain.

Baring (1849) attributes great importance as a causative factor to oxalic acid which he found in the blood of one of his patients.

In an article written by W. E. Schroeder and F. R. Green for the *American Journal of Medical Sciences* (February, 1902), attention is called to the fact that the diaphragm does not receive its sole motor innervation from the phrenic nerve, but partly also from diaphragmatic branches of the lower six intercostal nerves. In view of the differences of opinion as to the role really played by the phrenic in hiccough, it is suggestive that in the experiments described in the last named article, hiccough was never a symptom in any of the various forms of irritation to which the phrenic was subjected. These experiments consisted of pinching the phrenic in eighteen cases of operation for cervical adenitis, severing it in one operation for removal of tumor of the neck, and a series of experiments upon the dog. Irritation always produced a contraction of one-half of the diaphragm, but hiccough did not occur immediately nor among the sequelæ in any of the experiments.

That the phrenic may take an important part, however in the phenomena can hardly be doubted when one glances over the list of reported cases in which the cause was only determined at autopsy. In these we note a series of diseased conditions located along the whole course of the phrenic nerve. As examples, beginning above, we mention brain tumor, necrotic cervical glands, pulmonary tuberculosis, abnormal conditions in the mediastinum, as aortic aneurysm, pleurisy and peritonitis. Gastric ulcer and carcinoma find frequent mention as also gastric dilatation and gastritis. All have noted the apearance of hiccough with greatest apprehension in post-operative abdominal cases, for it is known as one of the commonest indications of peritonitis.

The irritation is often found to be a remarkable distance from the seat of spasm, as in the following cases. In the first, (mentioned by McCartie in the *New York Medical Record*, December 1, 1894), for years the irritation of a small skin area on the chin, as in shaving, would bring on an attack of a few seconds' duration. The final attack, in which the patient died, was brought on in this manner and had a duration of five or six weeks. Injections of cocaine gave temporary relief, but excision of the area of skin had no result.

The second case, by another author, is similar. The patient was being shaved when the spasm began. On the theory that it was due to an irritability of the inferior dental branch of the inferior maxillary nerve, the former was severed but with only temporary improvement.

In the cases where wounds of the extremities were mentioned as causes, probably the spasm was rather the result of some septic material in the blood affecting the centre than simply a reflex nervous process.

Its occurrence after alcoholic debauch is so well known that the comic papers invariably interject the inebriate's speech with the sound "hic." In some cases the regulation alcoholic hiccough has occurred in such prolonged attacks that life has been endangered from exhaustion. Its occurrences in these cases may be interpreted in several ways of which it is perhaps impossible to say now which is nearest the truth. It may be produced reflexly by distension of the stomach, or by irritation of the nerve endings in the gastric wall by the imbibed fluid, or it may arise from central irritation by alcoholic products in the blood.

It has been known to occur in epidemics, and Abeles, (Ueber Singultus Epidemien, 1896, x, 867, 885), mentions two of such. In one the epidemic occurred in a girls' school and continued for several months. The other occurred in a village where the symptom was so common as to be apparent to the casual visitor. In both instances the epidemic was probably of hysterical origin.

That hiccough can be caused by an inflammation limited to the phrenic nerve is an assumption which, if a truth, would afford the only possible grounds for belief in the idiopathic nature of the disorder. Arguing from analogy, however, and comparing with the symptoms of neuritis with which we are familiar, we would expect paralysis rather than spasm, excepting possibly in a very evanescent and primary stage.

In addition to the conditions heretofore mentioned as being most often complicated with hiccough, it has occurred with the following: dentition, constipation, worms, ulcers of stomach and intestine, abscess of liver, disease of kidney, fracture of ribs, pneumonia, inflammation of spinal cord or its sheath, disease of the vertebræ, facial erysipelas. The common association which the older writers gave it with hernia and other abdominal troubles and its significance as a fatal sign found its origin in its occurrence with the terminal peritoneal inflammations.

We read in one or two reports of its appearance subsequent to a surgical operation, where it was thought that the anaesthetic was the excitent. In Mrs. Z. this may have been an immediate cause. She had suffered from occasional brief seizures for several months before the attack which caused her to seek hospital treatment. These commonly followed the ingestion of food, were often accompanied by abdominal distension, and infrequently seemed to be induced by attempts at defœcation. Added to the previously mentioned hyperexcitability of the whole nervous mechanism, including the general and local sexual condition, there came, some weeks before admission, the sudden shock of an operation for dysmenorrhea, with its irritation of the sexual organs by the curette, of the lungs by the ether, and of the whole nervous system by the excitement and anxiety accompanying the operation. The hiccough began while the patient was emerging from the influence of the ether.

ACCOMPANYING SYMPTOMS AND DURATION. The characteristics of individual attacks are extremely variable in different patients and this irregularity is not surprising, considering the large variety of causal conditions.

Thus the attacks may be continuous or intermittent; the patient may suffer but one attack of longer or shorter duration or any number of succeeding seizures with diminishing or increasing intervals of time, the separate spasms showing the same lack of, or irregularity in, rhythm, both in respect to a single patient or in a comparison of many. Patients differ in regard to the degree of exhaustion produced; in some there is scarcely any, the only annoying factor being the peculiar sound which draws the attention of associates. In some it continues during sleep, and in others disappears.

In Mrs. Z. the attack which brought her to the hospital was of at least five weeks' constant duration, night and day, and yet exhaustion was evident in only a minor degree. Her countenance on admission wore a somewhat weary expression, though not pinched or anxious. The circulatory system was normal, the pulse not very rapid, though perhaps subnormal in tension. The respiratory organs seemed in normal condition. In examining the digestive system, the tongue was found to be slightly coated, the stomach distended and the intestines filled with gas. Masses of feces could be distinguished in the colon and rectum. The hiccough on admission occurred about once in four seconds and yet she talked with ease, smiling pleasantly, showing no great annoyance.

In comparing the duration of the attack in different patients we find some interesting reports.

At a meeting in St. Louis (*St. Louis Medical Journal,* 1882, I, 377) in which hiccough was being discussed, Dr. Pollak mentioned a record-breaking case. The patient suffered for twenty years from constant hiccough, and coincidently it was recorded that the husband, unable to sleep, procured a divorce. At the end of twenty years the doctor lost track of the patient.

Certain patients are able after a time to control the sound.

Dr. Rowland, at the meeting just mentioned, spoke of a healthy male, thirty-five years old, who for ten or twelve years suffered almost constantly when awake and had the hiccough often when asleep. The frequency of this case was about once or twice a minute. He learned to control the same while in the society of others.

Ferguson, (*London Lancet,* 1895, I, 402), reports the case of a male who suffered for seventy-two hours, the hiccough disappearing only under deepest chloroform narcosis, to return again with emergence from the effects of the anæsthetic. The patient recovered.

Felce, (*British Medical Journal,* 1889, I, 660), tells of a patient suffering from catarrhal jaundice complicated by hiccough, the duration a week, the spasm only disappearing temporarily during profound narcosis. The issue was fatal.

Holston, (*Western Lancet*), reports a case of seven years duration resulting from an attack of whooping cough, terminating in recovery.

J. O. Leonhardt, (*Lancet,* 1895, II, 452-4), describes a peculiar case. The man was affected with migratory rheumatism, and every time that he moved his shoulders in bed, immediately he suffered from diaphragmatic spasm, even when the inflammation was confined to his ankle.

O'Leary, (*Atlantic Medical Weekly,* Providence, 95, III, 289, 294), had five patients in whom the duration of the attacks was respectively four days, four days, four days, twenty days and six weeks.

Wilson, (*British Medical Journal,* 1895, I, 922), mentions a case with a peculiar characteristic. The whole attack was of about seven months' duration, and the patient could at any time procure and maintain temporary immunity by lying face downwards. Pressure on the ovary would at any time bring on violent attacks. The description is at least suggestive of hysteria.

In the *Boston Medical and Surgical Journal,* (March 8, 1894), is an example of extreme exhaustion. During the three months of hiccoughing the patient lost seventy pounds in weight, decreasing from one hundred and fifty to eighty pounds at the time of his death.

In the *American Year Book of Medicine and Surgery,* Gould, (1897, p. 464), I find reference to hiccough occurring in the fœtus. Three cases have been reported by Dr. Lee, and two by Fink, who diagnosed it in seven of a hundred and fifty pregnant women. He recognized it by rhythmical tapping movements in the neighborhood of the fœtal shoulders. It took place from the seventh month on and through labor.

Prognosis. The outcome of any given attack depends, of course, upon the gravity of the exciting cause. There have been reported a large number of deaths. Of these probably the majority died of the primary disease, as in peritonitis, gastric carcinoma, etc. It seems possible, however, that a few died from the exhaustion produced by the action itself. Such results is conceivable where the spasm is excessively violent.

TREATMENT. If there is anything humorous in the consideration of the subject it is to be found in glancing over the list of remedies which are supposed to have special efficacy.

The list is headed by one which is nothing if not a delicate drug, *i. e.,* the web of the black spider. Many others are noted, as musk, camphor, ammonia, wine and spirits, ether and chloroform, by mouth, by inhalation and as an abdominal spray, strychnine, prussic acid, alkalies, bromides, atropine, opium, valerian, asafœtida, castor oil, quinine, arsenic, turpentine, anise, mint, cloves, Hoffman's anodyne, nitroglycerin, inhalation of Scotch snuff, pilocarpine, cannabis indica, chloral, sulfonal, inhalation of burning paper and of capsicum, salycilates; bleeding, cupping, vomiting, purging, poultice of garlic and hemlock, warm plasters, anodyne frictions, ice applied at various points, galvanism along phrenic nerve, at back of neck and over the epigastrium, static electricity, lavage, depression and regular traction of tongue, pressure upon phrenic nerve, large enemata; suggestion, distraction of attention, fright, etc.

In certain cases the drug given probably did effect a cure, and of this number some were inadvertent cures, others the result of deliberate aim at the conditions producing the spasm. In a large number of cases, however, the effect ascribed to the drug was neither logical nor accidental. There was simply no relation between the action of the drug and the cure. The troublesome symptom was either self-limited or ceased because of some agency whose action was not taken into account.

Christmas, (*British Medical Journal,* I, 596), thinks that he cured a case with two large doses of ether and nitroglycerin. He says that these are antispasmodics. He forgets that both are primarily stimulants, but is logical when he says that their effect is not due to a depressant action on the respiratory centres, else morphia, which has failed, should have succeeded. He puts forth an interesting theory that the hiccough may be Nature's demand on the vaso-motor centre for an increased visceral circulation, and he is again logical when he says, that if so we should refrain from giving nervo-muscular sedatives and should particularly refrain from giving morphia.

In all cases we should give rational treatment directed at the cause. If this cannot be discovered then we can use measures which would have an improving effect upon the whole economy. Such would be thorough rest, both mental and physical, massage, hydrotherapy, electricity, care of the diet, and, in a word, general hygienic methods. Failing in this last, one, if he chose, could begin at the top of the list of empirical remedies, travelling down until either his own patience or that of the victim became exhausted.

In our early teachings we learned that certain drugs were classed under one name because of some similarity of action. Thus the alteratives, the tonics, the antispasmodics have been grouped. We are constantly tempted to match the group name with some prominent symptom of the patient and administer one of the drugs of this class. For example, hiccough is a spasm, therefore we give an antispasmodic. If, however, we yield to such temptation, we often discover later that our reasoning has been somewhat superficial. Let us see how this variety of reasoning applies to our own case.

In the case of Mrs. Z. the indications were to relieve the exhausted and hyperexcitable nervous condition, by rest and isolation from the marriage bed, to empty the lower bowel, strengthen the intestinal and abdominal muscles, thus eliminating pressure from flatulence and removing the toxic substances from the blood current. The only other symptom which was found offering an indication was the lowered blood pressure. Briefly summed up we had to relieve, (1) general exhaustion, (2) paresis of abdominal and intestinal muscles. (3) intraabdominal pressure, (4) diminished vascular tone. Now let us argue that the hiccough is a spasm and proceed to give an antispasmodic, for example, gelsemium. Gelsemium according to Biddle is a powerful depressant of the motor centres in the spinal cord: in only moderate doses it produces a sense of languor, diminished frequency of pulse, and lowered blood pressure. So we have contrary to our indications increased the languid feelings, made still more passive the paretic abdominal and intestinal muscles, and have finally still further diminished a lowered blood pressure.

As a matter of fact, we confess that we gave gelsemium in rather large doses, but *per contra* otherwise met our indications by proper rest, tonic, stimulant, and electric treatment. Whether it was that the indicated treatment overbalanced the effect of the illogically given drug, or that the symptom was self-limited, or that the drug really had met some of our indications in a manner not explained by our knowledge of its action, we do not know, but following two full doses of gelsemium the spasm certainly was reduced in frequency, and finally on the third day of hospital treatment, ceased almost entirely. Though the relief followed somewhat abruptly the taking of gelsemium, it is worthy of notice that previous to the administration of the drug the bowels had been thoroughly cleared, undigested food removed from the stomach by gavage, and other means taken to improve the general condition. Another factor which throws doubt upon the efficacy of the drug in this case, or at least one that must be considered in the distribution of the credit for the cure, is the use of the static machine which was made on the same day and only five hours before the final cessation of the annoyance.* Several large sparks were directed at the epigastrium, much to the surprise, and possibly fright of the patient, and producing immediately a longer interval between the spasms than had been noticed previously. After some days of hospital treatment, the patient was sent into the country, and now after two months there has been, so far as we know, no recurrence.

The moral to be found in the history of hiccough is self-evident. Treat, not the name of the disease, not even the disease, but the patient. Perhaps in all medicine we could find scarcely a disease, condition, or a symptom in which we could trace so easily the faltering, zig-zag footprints of a groping empiricism.

A CASE OF ANGIO-NEUROTIC ŒDEMA.†

By JAMES F. ROONEY, M. D.,
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Angio-neurotic œdema, while not absolutely rare, is still so infrequent that cases, such as the subsequent one, presenting suddenly and threatening fatality, are, it seems, interesting, if not profitable for record.

Miss A. S., 34 years of age, single, a mill-hand by occupation, was taken ill while sitting near an open window in church, on the evening of March 11, 1900. She very suddenly experienced shortness of breath, accompanied by expectoration of frothy, thin fluid. She immediately left the church and was able to walk home,—a distance of a mile, when I was called to see her.

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*We have said that the hiccough ceased five hours after the use of the static machine, on the third day of hospital care, but we should modify this statement slightly. The patient was unaware of any later spasm, though the nurse noted that shallow and aborted hiccoughs occurred occasionally for eight or nine hours.

† Read before the Medical Society of the County of Albany, April 9, 1902.

On my arrival her condition was as follows:—

The face was irregularly swollen, especially about the eyelids and lips so that the palpebral orifice was almost wholly closed; there were pitting on pressure, no itching, and cyanosis of the entire face, especially marked about the œdematous areas; her expression was anxious, the alæ nasæ moving actively with inspiration and pupils in mid-dilation, reacting to light; the patient was conscious; voice almost inaudible, harsh and high-pitched; frequent distressing cough with scanty, frothy, serous expectoration; pulse quick, small and of high tension, beating 120 to the minute; respirations labored, 45 to the minute; accessory muscles of respiration active.

Examination of the chest showed a respiratory excursion of little amplitude, the chest moving up and down as in emphysema; respiratory murmur obscured by fine moist rales, which were present all over the chest, but especially noticeable at the bases of both lungs posteriorly. The heart sounds were normal with accentuation of the aortic second sound.

She was given hypodermatically, strychnine sulphate, gr. 1-20, atropine sulphate, gr. 1-100, and nitroglycerin, gr. 1-50.

Within fifteen minutes the lungs were free from rales, with the exception of a very few over the bases, and the swelling of the lips and eyelids lessened. The voice became less hoarse, though by palpation through the mouth the epiglottis could still be felt to be quite œdematous. The respirations dropped very rapidly to 23 per minute, the cough became infrequent, expectoration ceased and the patient said that she felt sleepy. About an hour after the commencement of the attack she voided twenty-eight ounces of pale clear urine, having a specific gravity of 1.009, acid, containing neither albumin nor sugar, but the indoxyl-potassium sulphate was greatly increased. The sediment was very insignificant, containing nothing but a quantity of vaginal epithelium. The next mornng the patient had fully recovered; there was no trace of swelling about the face, although the eyelids were a little baggy, and she returned to her work.

The patient gives no history of preceding illness except the attack mentioned below bearing upon the case; has had none of the infectious diseases except scarlet fever and measles in childhood. Two years previously the patient had had an attack of sudden swelling of the lips and eyelids beginning immediately after exposure to a draught of cold air while at work, but in this attack there were no symptoms on the part of the respiratory system. She said that the swelling lasted for three or four days. At no time during the interim between her attacks or subsequent to her latter one, the whole of which time she has been under constant observation, and during which many urinary examinations were made, were there discoverable any objective, nor did she present any subjective symptoms pointing toward cardio-vascular or renal disorder. There is existent, however, in her family, a marked neuropathic heredity. Her father died in a state institution for the insane at the age of forty-eight; one brother committed suicide after a periodical drink-storm at the age of twenty-nine; one sister is a prostitute, another sister and a niece—the daughter of her self-killed brother have attacks of grand hysteria. There is so far back as it has been possible to go, no history of sudden, transient œdemas in any other member of the family.

The most noticeable points in the above case are: (1) the neuropathic heredity, (2) the suddenness of onset after exposure to cold, (3) the extensive distribution of the lesion, (4) the threatening character of the symptoms, (5) the transiency of the attack.

The disease, which received its name, "angio-neurotic œdema,' from Strubing, who reported a series of cases in 1885, has been described under various names for a long time prior to this. Since 1827-'28, probable cases have been observed and reported, although not differentiated from other forms of acute œdema. Quincke, and Dinkelacker, his pupil, were the first to differentiate the disease and describe it as a separate entity from other affections. It does not seem that at first the distinctively neurotic origin of the symptom-complex was recognized for it was described before 1885 under such titles as "acute circumscribed œdema of the skin" (Quincke, Courtois-Suffit, Graham, etc.), "a peculiar form of erythema" (Goltz), "giant urticaria" (Milton), "acute retrobulbar edema" (Gruss), although the factor in its etiology of genital crises as menstruation and the menopause, were recognized by Börner, who described it under the title, "swelling of the skin accompanying menstruation and the menopause."

Cuntz, in his essay on the pathology of the vaso-motor nerves, in 1874, was, it seems, the first to attribute its true role to the neurotic element which forms the basis of the disease. The disease has often been confounded with urticaria and there are still some who argue that there is a very close relation between the two, the foremost among whom are Courtois-Suffit, Rapin and Packard. The hereditary transmission of the disease has been especially well shown by Osler, Falcone, Schlesinger and Ricochon. Its occurrence during the course of Basedow's disease has been mentioned by Joseph Maude, and Millard. Galatti in his case describes a transient paralysis occurring in the course of an acute skin-edema as being due to a localized area of edema of the brain. Schlesinger, who has written quite extensively upon this subject, classifies under the name "hydrops hypostrophos," all edemas that are transient and recur, having no ascertainable underlying or associated pathologic lesion.

Summary of literature. The edema has been described as occurring in the skin (Baruch, Bauke, Bitot, Börner, Charcot, Collins, Courtois-Suffit, Couty, Curtis, Dinkelacker, Elliott, Falcone, Fitzgerald, Gibson, Goltz, Graham, Hartzell, Henoch, Holmes, Horwitz, Jamieson, Joseph, Kirsch, Landor, Leydon, Loimann, Lovett, Matas, Milton, Minich, Morse, Müller, Mumford, Napier, Onuff, Oppenheimer, Osler, Quincke, Rapin, Ricochon, Riehl, Robinson, Rosin, Schlesinger, Simon, Slifer, Smith, Starr, Strubing, Ullman, Widowitz, Wills and Cooper, Kohn); mucous membranes and glandular system including the thyroid (Edwards, Holmes, Elliott, Oppenheimer, Packard, Rapian, Talley); joints and tendon sheaths (John, Schlesinger); brain (Galatti). With it has been associated singly or together, hemorrhage from the mucous membranes (Kussner); gastro-intestinal pain (Bauke, Couty, Elliott, Hartzell, Henoch, Joseph, Leyden, Napier, Osler, Wills and Cooper, etc.); paroxysmal hemoglobinuria (Joseph); purpura (Couty, Henoch, Holmes). As factors in its etiology are mentioned organic and functional nervous diseases as epilepsy (Simon); hysteria (Charcot, Bitot); menstruation and menopause (Börner); cold, (Cooper, Calcone, Laudon, Morse, Osler, Onuf, Starr, Widowitz, Wills and Cooper, etc.); heat, (Kohn); heredity (Falcone, Osler, Quincke, Ricochon, Schlesinger, Strubing, Yarian, Milroy—a series of cases of hereditary *persistent* edema of the lower extremities, although not strictly angio-neurotic, may well be listed here for the purposes of reference); alcohol (Oppenreimer); trauma (Horwitz, Gibson); malaria (?), (Matas).

Nothing is known of its true pathogeny or pathology.

The chief etiologic factors seem to be: (a) a neurotic or direct heredity, (b) a nervous system excitable by slight peripheral stimuli, (c) exposure to heat or cold, (d) the presence of a neurasthenic or hysteric syndome.

The best recent bibliography is that given by Kohn, of Philadelphia, appended to his excellent article published in *American Medicine*, Vol. II, No. 25, to which may be added the contribution of Milroy in the *Proceedings of the Nebraska State Medical Society for 1892.*

TRAUMATIC APPENDICITIS.*

By ALVAH H. TRAVER, M. D.;
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The literature on appendicitis has been so exhaustive that at first one would think it difficult to say anything on the subject not already known. The various symptoms and the significance of the same; the various operations and the advantages claimed for each, have been thoroughly described and are generally understood. However, the knowledge of the causes of appendicitis is as yet far from complete.

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* Read before the Medical Society of the County of Albany, April 9, 1902.

The common causes of appendicitis as given by most authors are catarrhal inflammation of the colon and adjacent appendix, and the presence of a foreign body in the appendix, most often of the nature of a fecal concretion. Some authors speak of traumatism also as a contributing cause.

Deaver says: "The connection between exposure and the development of appendicitis is most clear and direct, and must be accepted as clinically important. The same is also true of traumatic appendicitis in a limited number of cases. Appendicitis has been known to follow traumatism in the region of the appendix with such frequency that its etiologic significance cannot be ignored." Fowler says: "In one of my cases the patient gave a history of a blow over the region of the appendix first before the onset of the attack." McNutt, writing on this subject, says: "We learn by experience that a goodly number of cases of appendicitis are the direct result of blows, falls, wrestling, etc. Three such cases have come under my own observation recently. One boy was kicked by a school-fellow, another was pushed with a stick, the third, a man, fell, striking right side of abdomen." Curtis says: "A certain number of cases of appendicitis have followed direct injury, such as blows or kicks in the right iliac region. The writer recently operated upon a boy whose abscess formed immediately after a severe blow from a ball received in that region." Mynter says: "Direct injury occasionally precedes an attack of appendicitis. I found this the case four times in seventy-five cases, Hankins found it sixteen times in 190 cases, while Fitz found trauma given as the cause 190 times in 257 cases, and from a very large number of cases he had collected considers it the cause of the attack in ten per cent. of cases."

I would like to report a case of traumatic appendicitis that recently came under my care.

Mr. E. E., aged 24, train brakeman; has always been a strong, healthy man; never had any severe illness; never had any intestinal trouble of any kind; bowels have always moved regularly. On March 1, 1901, while applying a brake on a freight car the chain broke and he fell between the moving cars. He got up from the ground and walked a few feet, then fainted. He was then carried into a nearby building and later taken to the Albany Hospital.

Examination.—Patient semi-conscious; numerous bruises were present on head, chest, right hip and right side of abdomen. No fractures or dislocations were present. There was a marked bulging of the right iliac region, which became more prominent when patient moved. On deep pressure a distinct tumor was felt in appendicular region. The patient was put to bed and ice bags applied to head and abdomen. At the end of thirty-six hours he regained complete consciousness and complained of severe headache, pain in chest, right hip and right side of abdomen. On coughing the pain in right iliac region became intense. During his stay in the hospital he was troubled greatly with tympanites and constipation. On leaving the hospital, the latter part of April, the hip was still very unsature. The hernia was prominent and tenderness was still present in appendicular region.

I was out of the city during May and June, so did not see the patient; but on my return found the patient in practically same condition as on leaving the hospital. During the summer I examined the patient frequently. The pain and tenderness in appendicular region were constant and became very severe when bowels moved. The tympanites and constipation were very troublesome.

Present trouble.—On October 19th the patient was taken with acute abdominal pain most severe in right side. In the course of twenty-four hours his bowels became very distended and he had frequent attacks of vomiting. I saw the patient on the evening of the 23rd. He had frequent attacks of vomiting of dark fluid possessing fecal odor. His general appearance was that of a very sick man. His temperature was 100.6, pulse 112. The abdomen was very much distended and general tenderness present, but tenderness was most marked in right iliac region.

The diagnosis of appendicitis was made and immediate operation advised. But both patient and his friends refused to consent to an operation. They finally consented to allow him to be removed to the hospital providing I would not operate. On admission to hospital anodynes were stopped, heart stimulants were given and ice bag applied to abdomen. In the morning he had recovered from the effects of the anodynes, and more thoroughly appreciated his dangerous condition and readily consented to operation.

Immediate operation was performed. On opening the abdomen we found the omentum firmly bound to the anterior abdominal wall. After carefully loosening this, we came down to the intestines firmly knotted together. The field of operation was walled off with gauze and the coils of intestines separated. Pus was found present between the coils of intestines. I could easily locate an enlarged and very adherent appendix lying deep down in the pelvis. As it was absolutely impossible to bring it up into the incision, the adhesions were broken up as carefully as possible and the base of the appendix tied off. The appendix was found to be perforated in several places. The pus was thoroughly sponged out. The cavity from which the appendix was removed was packed with iodoform gauze and a glass drainage tube introduced into the pelvis. The wound was closed with through and through silk worm gut sutures and regular dressing applied. The patient stood the operation fairly well. For twenty-four hours following operation he continued vomiting dark fluid. Drainage rapidly diminished so that the tube was removed the next day after operation. The highest temperature following operation was 100.4°, highest pulse 100. He made a rapid recovery with no complications, except hæmaturia, which cleared up in about forty-eight hours.

The reasons which lead me to conclude this attack of appendicitis was caused by previous injury are:

(1st.) The distinct evidence of injury to right iliac region.

(2d.) The inflammatory tumor in appendicular region following injury.

(3rd.) From the time of the injury to the onset of the attack of appendicitis he was troubled with tympanites, constipation and constant pain in right iliac region.He had been troubled with none of these previous to injury.

(4th.) At operation the old firm adhesions gave evidence of previous severe inflammation. It is to be noted that he had had no previous attack of appendicitis or other cause for such inflammation except the injury.

That such inflammation could have been the cause of this attack of appendicitis is perfectly possible. McBurney, in speaking of trauma as a causative factor in appendicitis, says: "Any traumatism, however produced, will give rise to an infected atrium—a necessary preliminary to inflammation here as elsewhere. If inflammation has led in involvement of the peritoneal coat of the appendix, and to the peritoneal coat of any structure adjacent to it, new tissue will be formed, leading in such case to periappendicular adhesions with resulting links and twists of the appendix itself, which interferes with its already poor circulation, and inflammation results."

Morrow says: "The chief cause for the bacterial infection of the mucosa of the appendix is by force applied in way. I believe that injury to the mucosa occurs most often from twisting of the appendix on its long axis as the result of adhesions."

From a careful analysis of the conditions found present at operation, and the history of the case, I believe I am justified in concluding that the inflammatory adhesions and resulting twisting of the appendix, caused by the previous injury were the causative factor in bringing on the attack of appendicitis in this patient.

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THE INFLUENCE OF THE DISCOVERY OF THE RELATION OF BACTERIA TO DISEASE ON THE PRACTICE OF MEDICINE EXCLUSIVE OF SURGERY.

Awarded the Schuyler Alumni Prize for 1901.

By H. JUDSON LIPES, M. D.,

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(*Continued from page 452*, ALBANY MEDICAL ANNALS, *August*, 1902.)

Diagnosis

Among the most practical results of bacteriological researches is the early diagnosis of certain diseases by methods which serve to demonstrate the presence of the specific infectious agents.

Bacteriological Laboratories.—The establishment of municipal and private laboratories for bacteriological research was necessitated by the demand for more scientific study of the cause, diagnosis and treatment of disease. Through the establishment of these institutions much help has been given the general practitioner, who desires to avail himself of the opportunity. What satisfaction it is to be able to positively ascertain the presence or absence of the tubercle-bacilli or of the diphtheria-bacilli. It would be impossible for every practitioner to possess the necessary equipment of a bacteriological laboratory even if he possessed the working knowledge, and therefore one can not overestimate the practical value of these laboratories.

Advantages Offered to Present Graduating Classes.—When the members of the present graduating classes of our medical colleges enter upon active practice there will be open to them many opportunities for making diagnosis which were not afforded to graduates of only a few years ago.

Aid Given by Bacteriology in Diagnosis.—At the present time there are three important ways through which assistance is given us in making a diagnosis.

First, through the demonstration of the bacilli themselves in secretions or in the products of disease; second, through the agglutination-test; third, through the injection of soluble products of the growth of certain bacilli.

So far there are only two or possibly three bacteriological tests which are in general use throughout the country, but when the practitioner becomes more familiar with the technique of bacteriological researches, many new tests and methods will be used by every one interested in the scientific consideration of disease.

Diagnosis of Tuberculosis from Sputum.—Probably the most utilized of all the bacteriological tests is that of the search for the tubercle-bacillus in sputa. The diagnostic demonstration of tubercle-bacilli is of the highest importance for the early recognition of tuberculosis. Owing to the specific behavior of this micro-organism with relation to stains, the demonstration of the tubercle-bacilli can be made with the greatest certainty by means of the microscope, and finding these organisms in the sputum renders unequivocally certain the diagnosis of pulmonary tuberculosis, and often this may be obtained before the disease is revealed by the usual physical examination.

Diagnosis of Diphtheria.—The importance of the early diagnosis of diphtheria can not be overestimated and this test is sought after probably more than any other at the present time. Modern treatment of this disease demands, as far as possible, an immediate diagnosis, and through the help of municipal laboratories this is readily obtained. The diphtheria-bacillus may be found in all cases of diphtheria in the diphtheric membrane and in cases of diphtheria of the tonsils throughout the cavity of the mouth. It lies superficially, usually in large numbers, rarely penetrating deeply, and therefore may be easily obtained for culture and subsequent examination.

Tests for Typhoid Fever.—During the last year the agglutination-test for typhoid has received considerable attention, and is becoming important in the diagnosis of that disease. There are other diseases, also, which may be differentiated by the so-called cerum diagnosis, as we shall see later on, which will in time be commonly used.

Diagnosis of Pneumonia.—Hitherto the bacteriological diagnosis of diseases has been confined largely to those lesions which are practically external or rather those in which the substance for examination is obtained near the surface. But by the aseptic methods known to the surgeon we might obtain the necessary material for examination by carefully introducing aseptic needles into the diseased organ and thus withdrawing the material for study. For example, in pneumonia, we might easily enter the diseased area without any danger of spreading the infection, and from the results obtained might differentiate a lobar pneumonia from an acute tubercular process. There is hardly any structure of the body that could not be entered in this way. The surgeon has already utilized this method and has recognized its great importance.

Under the subject of etiology we have given the agent of infection of the many diseases which have been found up to the present time, and in any of these diseases the discovery of the specific organism is sufficient to form a positive diagnosis.

Let us, in our consideration of the subject of diagnosis, take up the bacteriological examination of the various secretions and excretions of the body rather than consider the diseases individually.

Examinations of Secretions of Naso-Pharynx. — Besides the examination of the throat for the diphtheria-bacilli, we are frequently called upon to differentiate other lesions of the naso-pharynx. In the nasal, pharyngeal and conjunctival secretions we may find, besides many non-pathogenic organisms, the bacillus of influenza, the bacillus of diphtheria, the bacillus pneumoniæ of Friedländer, the bacillus of Weil, the pneumococcus of Fränkel, besides streptococci and staphylococci. All of these bacteria excepting the first named may exist in the upper air passages, but do not occur in the bronchi and in the pulmonary tissues in healthy persons.

The diagnosis of influenza, for example, is thus easily made in the earliest stage of the disease.

If the bacillus of whooping-cough proves to be the true cause of this disease, the examination of the secretions of the naso-pharynx, as well as of the sputum, for this germ will prove of great diagnostic importance.

In specific inflammatory conditions of the conjunctiva, the importance of differentiating diphtheritic from a gonorrhœal or a tuberculous conjunctivitis is very important and may be easily done by the methods of modern bacteriology.

Examination of the Sputum. — The various diseases of the lungs have a deeper significance to us since the causative agents have been ascertained, and methods for finding them have been given us by the bacteriologist. We have two methods of studying this class of diseases: First, by examination of the sputum; second, by direct puncture of the diseased lung with a thoroughly sterilized hypodermic syringe and thus obtaining a few drops of the exudate.

Bronchitis. — Bronchitis, whatever its nature may be, is dependent upon the activity of the common exciting agents of inflammation: pneumococci, streptococci, staphylicocci, pneumobacilli, bacterium coli. As has been stated, these germs are often present in the upper portion of the respiratory tract in the healthy individual, but when they become lodged in the bronchi a bronchitis follows through the action of cold or of some other injurious agency. The same cause renders it possible for the bacterium to penetrate more deeply into the air passages, and there to give rise to pneumonic processes. The examination of the sputum, uncontaminated with the secretions of the mouth (which may be obtained by the patient cleansing his mouth thoroughly with a solution of boric acid), is not difficult. The beneficial results of such an examination are most marked. We may thus differentiate a simple bronchitis from a tubercular process.

Differential Diagnosis of Pulmonary Lesions.—We may be able to designate a pneumonia as a pneumococcus, an influenza or a tubercular pneumonia. In other infectious diseases, the diagnosis of which is uncertain, we might have a complicating pneumonia (and complications might occur in other organs), and by finding the germ causing the lesion we would then be able to diagnose the general condition. For example, we would find the typhoid bacillus in the sputum of a case of typhoid pneumonia.

In bubonic plague, broncho pneumonic foci sometimes occur, and the sputum of such patients contain the plague-bacillus often in pure culture, sometimes in association with diplococci and streptococci.

Examination of the Urine.—While the urine is examined more than any other excretion of the body, it is not so important bacteriologically. The findings become of value, however, especially in certain cases of typhoid fever, when the urine frequently contains the characteristic bacteria, especially in cases complicated by albuminuria. Tubercular bacilli are also found in the pus of urine in lesions of the urinary tract, as well as the gonorrhæal organisms in gonorrhæal cystitis.

Examination of Feces.—The feces examined with care often reveal the causative agents of general or local diseases.

The typhoid bacilli are usually found by the second week of that disease in the feces, but, as a rule, not in large number, and they are isolable only with great difficulty on account of their close resemblance to the bacterium coli commune.

The tubercle bacilli when found in the feces show that somewhere in the intestinal tract there is a tubercular process going on.

In cholera, the vibrios can be demonstrated in the feces on an average to the tenth day after the inception of the disease, and as the comma-bacilli have never been demonstrated in association with other diseases the diagnosis is positive when this organism is found.

In tropical dysentery the amebæ can be demonstrated where the fresh stool is examined, as they are regularly present, especially in the mucous elements thereof.

The diagnosis of the two last named diseases are of great importance, especially in the emigrant ports and in our new possessions.

Examination of Urethral and Vaginal Secretions.—The bacteriological examination of the urethral, vaginal and uterine secretions belongs rather to the realms of surgery. The gonococci and the tubercular bacilli are most frequently found together with the micro-organisms of inflammation.

Cerebro-Spinal Fluid.—A direct bacteriologic diagnosis of the meninges is possible during life by means of puncture of the spinal canal, and this method has now been quite extensively practiced. In cases of tuberculous meningitis the pus contains tubercle-bacilli, partly alone and partly associated with phlogogenic cocci. From the exudate in cases of secondary meningitis there has been cultivated the diplicoccus lanceolatus Fränkel, the streptococcus and staphylococcus pyogenes, the bacterium coli. When we find the diplococcus intracellularis meningitidis of Weichselbaum or Jäger, we may be sure that a diagnosis of epidemic cerebro-spinal meningitis would be correct.

Examination of the Blood.—In the examination of the blood much is revealed to us both in a pathological and bacteriological way.

Of all diseases which we now know to have a specific cause, malaria is, perhaps, the most interesting. The clinical picture has been well known for some time, but the diagnosis has often, especially in apparently non-malarious districts, been quite difficult. This no longer obtains as when an examination is made of the blood, preferably from three to ten hours in advance of the peculiar paroxysm of that disease, when the parasites have reached the heighths of their development, and a single undoubted malarial parasite is found, the diagnosis is established with certainty. The bacteriologist has also cleared up for us the cause of the several types of malaria—the quotidian, tertian and the quartan—for they have found that the exciting agents of the various types of fever belong to different species. There are other specific lesions which we are now able to diagnose by a study of the blood, and in its list we find malignant endocarditis, pyemia, bubonic plague, pneumonia and gonorrhœal septicæmia.

In relapsing fever the spirilla of Obermeier are present, in varying number, only in the blood of those suffering from this disease, and are not ordinarily found in the secretions and excretions.

A peculiarity of the anthrax bacilli is that while found in the blood they are but seldom found in the larger vessels, but are abundantly present in the capillary area, particularly in the spleen and liver.

In considering the diagnosis of the different diseases we must not forget that if we are not able to isolate the individual germ by pure culture or otherwise for microscopical examination, we may infect some of the lower animals, *e. g.*, the rabbit or guinea pig, with the suspected media, and in this way be able to diagnose the disease from the manifestations of the disease in the animal inoculated, as well as by post-mortem examination of the animal itself. And, too, it is some satisfaction, at least to the clinician, to be able to positively diagnose a condition post-mortem which had been impossible during the life of the patient.

Diagnosis by Means of Agglutination Tests.—The second very important method by which the early diagnosis of certain diseases may be obtained is the agglutination test. Through the labors of Gruber and Durham, and somewhat later of Pfeiffer and his pupils, general attention was directed to the behavior of immune serum when added in small amounts to typhoid-bouillon, cholera-bouillon, coli-bouillon, etc. The reaction may be obtained either macroscopically or microscopically.

With an observance of certain precautionary measures the reaction of Gruber is of great service in the differential diagnosis of bacteria that resemble one another morphologically. The diagnostic assistance of this agglutination test is now being extended to a considerable list of diseases, but it is best known by its use in the diagnosis of typhoid fever where it has proven of inestimable value.

Widal's Reaction in Typhoid Fever.—Widal demonstrated that the serum of typhoid fever patients at the end of the first or at the beginning of the second week of the disease most distinctly yields the agglutination-phenomenon with typhoid-bacilli. This fact is of the greatest importance from a practical point of view, as it renders possible the diagnosis of typhoid fever with the aid of the serum of a suspected patient. Blood-serum from the patient suspected to be suffering from typhoid fever is obtained by aseptic puncture of the tip of the finger or of the lobe of the ear. Inasmuch as the serum of typhoid patients, even when not sterile, retains its agglutinating power unchanged for several months, it may be preserved and sent to distant laboratories for examination. As a rule, the agglutinating property appears in the serum after the seventh day of the disease, although it may appear later or earlier. This fact is of importance in diagnosis.

Just what the nature of the agglutinating substance is has not yet been determined.

Malta Fever.—Next to typhoid fever, Mediterranean or Malta fever seems at present the disease in the diagnosis of which we are most helped in the agglutination-test. This condition is not, however, of so much importance to American physicians, except to a few at the several ports where the disease is now frequently seen. But to the physician of Southern Europe it is of great utility.

Relapsing Fever.—At one time is was difficult or quite impossible to diagnose relapsing fever, particularly between the paroxysms, but it is now possible by the use of a reaction akin to the agglutination-test. Löventhal shows that a diagnosis can be made without waiting for a relapse, and that the recognition of the first apyretic stage may be made so that antispirillum serum may be used to ward off further attacks. In doubtful abortive attacks the serum test may be very useful, and if the result of the test is negative, and other conditions allow it, the patient can be sent home before the end of the fortnight—the usual observation period.

Durham believes that the serum test with the bacilli most frequently concerned in meat-poisoning (Gartner's bacillus enteritidis) is destined to play an important part in the recognition of the true nature of certain obscure fevers. While practical use is not as yet made of the agglutination-tests in other diseases, well-marked agglutination-reactions have been constantly observed in leprosy, bubonic plague, Asiatic cholera and tropical dysentery. None of these diseases are of great interest to the practitioner in this climate, but they are of considerable interest to the medical department of our present Army and Navy.

Agglutination Test for Tuberculosis.—It will be a great benefit to mankind if such a method of diagnosis could be obtained in relation to tuberculosis, but, although individual observers have reported success in the attempt to apply the serum-test to the diagnosis of this dreadful disease, confirmation has been generally lacking. The successful application of this test would be of inestimable benefit since the early positive diagnosis of this condition would result with our present methods of treatment in the cure of such patients. Arloing, in 1898, investigated this method of diagnosing tuberculosis and was the first to apply this method, and in a recent journal Arloing and Courmont have published the result of their investigations to date.

Its Successful Application.—They have formed from the examination of four hundred cases, and from the reports of other authors, the following conclusions: The employment of homogeneous cultures in glycerin-bouillon of the bacilli of human tuberculosis has permitted them to investigate the agglutination-power of the blood, and principally of the serum of tubercular patients, and thus of accomplishing the serum diagnosis of tuberculosis.

Advantages of Sero-Diagnosis.—The advantages of this method are those of sero-diagnosis in general: 1. *Absolute innocuousness,* since the withdrawal of only a few drops of blood or serum is all that is necessary, and since this method is applicable to all patients whether in incipient or advanced stages ; 2. *Facility and rapidity,* since it is not necessary to have the patient at hand, and the test lasts only a few hours; 3. *Sensibility* of the reaction in the discrete or latent lesions and difficulty of diagnosis by habitual procedures. In slightly advanced pulmonary tuberculosis the power of agglutination of serum is almost constant. In grave or very virulent vases the sero-reaction is often lacking or very feeble. What we want, however, is the early diagnosis of this disease. Experimental facts confirm those of the clinic. The power of agglutination appears then more often, within certain limits, in inverse ratio to the gravity of the infection or the extent of the lesion.

Since the serum tests in other diseases have become of great value, and since the early diagnosis of tuberculosis is of so much importance, and, too, since the agglutination test is almost constant and more marked in the early stages of tuberculosis, the value and future general use of this test will undoubtedly be unlimited.

Injection of Toxins for Diagnostic Purposes.—Another method of diagnosis which has proved of practical utility in but two diseases, is the use of the injection of toxins produced by the growth of the bacteria, as well as of substances extracted from the bacteria themselves, into the body of the suspected individual.

Tuberculin.—The discovery of Koch of toxins in cultures of the tubercle bacillus which possess properties, which explain its pathogenic power, must rank as one of the first importance in scientific medicine, on account of what it has lead up to, even if—as appears probable—the final verdict may be that its therapeutic value in the treatment of tubercular diseases in man is very slight.

The chief use to which tuberculin has been put is as an aid to the diagnosis of tuberculosis in cattle and human beings, and for this purpose has proved to be of inestimable value, and has passed into quite general use despite the warnings of Virchow.

Action of Tuberculin.—At first some believed that the irritation aroused in the tuberculous foci by the tuberculin sometimes causes a dissemination of the bacilli and an increase of the disease. Dr. Trudeau says: "No evidence in connection with the tuberculin test as applied to man and animals has been forthcoming thus far from those who have made use of it, which would tend to sustain the general impression that this method is necessarily dangerous and tends invariably to aggravate the disease, and my own experience has developed nothing which would seem to confirm this impression. It is evident that the size of the doses given has much to do with the limitations of this method for usefulness and the correction of the conclusions reached by its application."

A drawback to its usefulness is that it does not reveal at all the extent of the disease, nor whether the tuberculosis is active or dormant. It is, however, of great value in selected cases, both surgical and medical, where slight tuberculosis is suspected, and yet where no decision can be reached. This test will soon be superseded, however, by the serum-test already described.

Mallein.—Mallein, likewise, is frequently used with success to obtain an early diagnosis of glanders. Sometimes the reaction is not forthcoming, as in the application of the test in tuberculosis, since other processes often intervene for the simple reason that the proteids are not *specific* in the ordinary sense of the word.

We have thus seen the great opportunities opened to us by the help obtained through bacteriological researches in diagnosing disease.

(*To be continued*)

> Went to the Hotel Dieu, a medical and surgical hospital. Saw Dupuytren and his pupils, visiting the patients. He is a rather large man, of a fine Bonapartean head, but sour, contumelious looks. He holds the very first rank as a surgeon. His operations are surprisingly bold and skillful. Edward C——, of Philadelphia, who is here studying medicine, told me a good anecdote of him. He has a notion that he can instantly detect hydrocephalus in a patient, from the manner in which he carries his head. One day, while he was in the midst of his scholars at the hospital, he saw a common sort of man standing at a distance, among several persons who had come for medical advice. Dupuytren's eye fell upon him, and he said to his pupils: "Do you see yonder, that fellow that has his hand to his face, and carries his head almost on his shoulder? Now, take notice: that man has hydrocephalus. Come here, my good fellow!"
>
> The man thus called, came up. "Well," said Dupuytren, "I know what ails you; but come, tell us about it yourself. What is the matter with you?"
>
> "I've got the toothache!" was the reply.
>
> "Take that!" said Dupuytren, giving him a box on the ear, "and go to the proper department and have it pulled out!"
>
> S. G. GOODRICH (PETER PARLEY).
>
> *Recollections of a Lifetime.*

In Memoriam

ROBERT M. HUNT, M. D.

Dr. Robert M. Hunt, of the class of 1869 of the Albany Medical College, died at Nevada City, Cal., July 15, 1902, aged 74.

Dr. Hunt was born in Herkimer County, New York, in 1828. He attended the common schools, and later worked in a machine shop. He also worked with a surveyor for three years. In 1847 he commenced to read medicine with his brother, Dr. Harvey Hunt, at Utica, New York, receiving his medical education at Geneva Medical College, Geneva, N. Y., Castleton Medical College, Utica, N. Y., and Albany Medical College, Albany, N. Y. Immediately upon the completion of his professional studies, in 1850, he decided to go to the new El Dorado, via the Isthmus of Panama, and upon arriving in California he started for the mines, taking the only means of transportation offered by the times, namely, ox team from Sacramento to Caldwell's Upper Store, afterwards Nevada City, arriving about the first of May, 1850. He was engaged in mining and lumbering for about two years, and then went into the drug business. Since 1853 Dr. Hunt had been in active practice continuously and had been very successful, having been regarded as one of the best physicians in the state. He was county physician from 1859, and in this capacity superintended the entire management of the Nevada County Hospital, which is one of the best institutions of the kind in the state, the standard of perfection having been attained through his untiring work and efforts.

The ANNALS is indebted to the courtesy of Dr. A. C. Hinkson, of Nevada City, for the following brief character sketch:

"Dr. Hunt was one of the oldest and most successful practitioners of this state, and for forty-four years was county physician of Nevada County. His reputation extended throughout the state, and he was noted, not only for his skill as a practitioner, but for his great charity and for the hand that was ever ready to stretch forth to the needy. There are, at present, in California, six successful physicians whom Dr. Hunt sent through college. During his long years of service he "officiated" at 2,800 cases of confinement. He was a member of the F. & A. M., having the unusual distinction of being elected to a life membership of that order. The ashes of the doctor are to be taken to Utica, N. Y., and placed in the family vault at that city."

MENZO BARKMAN, M. D.

Dr. Menzo Barkman, of the class of 1879 of the Albany Medical College, died from malignant disease at the Albany Hospital on August 10, 1902. Dr. Barkman was born in Broome, Schoharie County, N. Y., October 5, 1855. After graduation from the Albany Medical College he practiced at Schodack Landing, and Waterford, and then conducted a drug store in Geneva. In 1894 Dr. Barkman removed to Binghamton, N. Y., and established a drug business, from which he retired in 1899.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, JULY, 1902

Deaths

	1902	1901		1902	1901
Consumption	17	16	Bright's disease	7	12
Typhoid fever	1	0	Apoplexy	4	9
Scarlet fever	2	0	Cancer	5	9
Diphtheria	1	1	Heat prostration	0	3
Whooping cough	1	0	Accidents and violence	12	10
Cholera infantum	17	8	Seventy years and over	19	28
Pneumonia	4	2	One year and under	26	34

DEATHS IN INSTITUTIONS	1901	1902
Albany City Hospital	9	12
Albany Orphan Asylum	1	0
County House	6	3
Home for Aged Men	2	0
Home for Friendless	1	0
Homœopathic Hospital	4	3
House of Good Shepard	0	1
House of Shelter	0	1
Public Places	5	6
St. Margaret's House	2	2
St. Peter's Hospital	0	3

Total number of deaths this month	135
Total number of deaths for July, 1901	142
Death rate for July, 1902	15.27
Death rate for July, 1901	16.06
Death rate, less non-residents dying in institutions during July, 1902	13.12

Births....................126 *Marriages*.................. 47

The exceeding low death rate for the month of July is to be noticed. The seventeen deaths from diarrhœal diseases among children, classed as cholera infantum, would seem to indicate that some systematized effort should be made to improve the milk supply in the city. The deaths from consumption, seventeen, seem to show a diminuition from the deaths from this cause. Two years ago, twenty, twenty-one or twenty-two deaths a month were extremely common. It is probable on account of the diffusion of information, concerning the means of fighting this disease, that every year less and less number of deaths will be recorded from it.

It is most gratifying to note the number of births reported for the month, 126. The physicians are reporting their births with greater promptness, as well as with greater thoroughness, and the Department is very much assisted in keeping its records, by the thoughtfulness of physicians in this respect. The moderate temperature through July is expressed by no deaths from heat prostration, as against three deaths from this cause a year ago.

At this writing there have been no cases of smallpox reported in the city for twenty-four days. There is only one convalescing case in the Smallpox Hospital, who is about to be discharged.

WORK OF HEALTH PHYSICIANS

Total number of assignments during the month	73
Total number of calls made during the month	290
Total number of vaccinations	23

INSPECTIONS

During the month eighty-nine markets were inspected, three milk rooms, fifty-seven milk peddlers inspected, six water peddlers and two fish markets. There were found three milk peddler's violations and one water peddler's violation. Thirty-four circular letters in regard to the care and handling of milk were sent out.

There were seventeen privies inspected and condemned during the month, eight closets, six drains, nine water nuisances found, two filthy yards, one filthy alley, two filthy cellars, eight filthy premises, eight manure nuisances, two stable nuisances, two chicken nuisances, one garbage nuisance, two dump nuisances, and four smoke nuisances. 150 re-inspections were made of nuisances, 107 notices served and forty-three nuisances abated.

CONTAGIOUS DISEASES REPORT	1901	1902
Typhoid fever reported	4	9
Scarlet fever reported	4	4
Diphtheria and croup reported	10	16
Chicken-pox reported	2	4
Measles reported	27	7

Number of houses fumigated.. 47 Number of rooms fumigated...148

Number of days quarantined for diphtheria:

Longest........51 Shortest........ 6 Average........27½

Number of days quarantined for scarlet fever:

Longest........59 Shortest........21 Average........40½

NOTES ON VACCINATION

Sanitary Record.

The following are from the memorandum book of an English medical officer of health:

I am quite aware that to argue with anti-vaccinators is flogging a dead horse, but without wishing for the appearance of smallpox, I should like these people to be compelled to see a real case of the disease not modified by previous vaccination.

I doubt whether they have any idea of its horrible character, with swelled heads and unrecognisable features, such as I have seen (as my patients), but couldn't recognize one from the other, only by means of their names over each bed.

I think also, it would be a good thing if, when one of these anti-vaccinators falls a victim to smallpox, those persons of his own faith and belief should be compelled to nurse and attend the case. I think they would then fly at once to the only "Protector," who is the vaccinator.

Our ancestors knew the horrors of the disease, we either don't know them or forget them.

Whence comes the immunity of the nurses in smallpox hospitals, except by vaccination or re-vaccination?

During the past seven years 630 cases of smallpox have been admitted in the Liverpool Smallpox Hospital.

During that time four hundred and thirty-four persons have been variously employed in this hospital in different capacities; six of them had had smallpox before joining, or the remaining four hundred and twenty-eight of this large staff, two contracted smallpox, and these two were ward maids, who had entered the wards before vaccination. One hundred students and doctors attended these patients, and none caught the disease; all of them had been re-vaccinated.

We don't get this immunity in the fever wards, for twenty-six members of the staff in the Fever Hospital took these diseases.

Very many of the anti-vaccinators have been themselves partially protected by their vaccination in childhood, and very many of them have been known to rush to the vaccinator again in the presence of an epidemic and in the hour of danger.

Smallpox is the most terrible disease that ever afflicted mankind, and sensible people will protect themselves and their families.

The brunt of the evil will fall upon the poor children, who will lose their beauty, their sight, and their lives, through the folly and ignorance of parents.

Compulsory Vaccination in Spain

Medical Record, February 15, 1902.

Smallpox is still extremely prevalent in many parts of the world, and especially in those places in which the laws regulating vaccination and re-vaccination are not stringent, and are not strictly enforced.

Germany provides a splendid object lesson on the matter; there, as in no other country, vaccination and re-vaccination at stated periods is efficiently carried out, the consequence being that smallpox has been almost completely vanquished.

Spain has no enviable reputation as regards her health laws, and an American is apt to associate with Spaniards slipshod and careless methods of preventing disease.

However, if the municipal authorities of all Spanish towns issued as drastic proclamations for the suppression of smallpox as has the alcade of Valencia, several American cities might with advantage take example from them.

According to the United States Marine Hospital Service Public Health Reports, January 24, the city ruler of Valencia has given notice that the following regulations must be complied with:

1. Vaccination and re-vaccination of all the inhabitants not already vaccinated declared compulsory.

2. To facilitate compliance with this order, without expense or trouble to the inhabitants, all the sanitary posts and relief stations of the city shall be permanently open.

3. All municipal doctors shall make known to the families of the sick poor whom they visit, that they can only assist and supply gratuitously on condition that they get vaccinated within twenty-four hours.

4. All schoolmasters, in both public and private schools, shall require certificates of vaccination from their pupils, and hold the same to be shown to municipal doctors charged with sanitary inspection of schools.

5. Laborers employed by the muicipality will not receive wages unless they present medical certificates of vaccination.

6. Directors and owners of factories and workmen of all classes shall exact from all their employes certificates of vaccination under penalty of fine if they admit any one without such certificate.

7. The directors of penitentiaries, hospitals, almshouses, homes for the invalids, asylums, sanatoriums, or similar establishments shall proceed immediately, if they have not done so already, to vaccinate or re-vaccinate all those under their care, and refuse admittance of visitors not furnished with vaccination certificates.

8. In the shelter sheds and casualty wards for paupers no admission or assistance will be given to the unvaccinated, unless they submit to vaccination on the spot.

9. The charity tickets distributed on feast days by sub-mayors will not be honored unless accompanied by certificates of vaccination.

10. All applications for stalls and booths in public markets must be accompanied by certificates, or no notice will be taken of them.

11. No name shall be inscribed on the parish poor list of any unvaccinated person.

12. Sub-mayors shall visit and inspect all houses in their respective districts, beginning with those in which cases of smallpox exist, and shall insist upon the immediate vaccination of all those who have not already complied with the order, threatening with summons and fine for disobedience to constituted authorities and endangering public health if they refuse to get vaccinated within twenty-four hours.

13. Proprietors of hotels and lodging houses shall refuse to admit any without proof of recent vaccination.

The infraction of any of the foregoing articles will be punished with a fine of fifty pesetas.

The preceding regulations appear to cover the entire ground, and to allow no loophole of escape from vaccination. These have been quoted at length to show that so far as enforcing vaccination, Valencia in benighted Spain requires no lesson from any town in lands considered highly enlightened.

SMALLPOX IN THE UNITED STATES

The smallpox situation in the United States may be better appreciated when it is understood that smallpox is very generally diffused throughout the country. The following statistics, from the public health reports of the Marine Hospital Service, for August 8th, shows the situation:

From June 15th to August 1st, there were reported

San Francisco, Cal.	19 cases
Jacksonville, Fla.	4 cases
Belleville, Ill.	15 cases
Chicago, Ill.	27 cases
Joliet, Ill.	15 cases
Indianapolis, Ind.	57 cases
34 counties in Iowa have many cases.	
Covington, Ky.	32 cases
Boston, Mass.	39 cases
Cambridge, Mass.	45 cases
Somerville, Mass.	24 cases
Lowell, Mass.	21 cases
45 counties in Michigan have many cases.	
60 counties in Minnesota	593 cases
St. Louis, Mo.	103 cases
Omaha, Neb.	51 cases
Nashua, N. H.	17 cases
Newark, N. J.	53 cases
Jersey City, N. J.	93 cases
Elizabeth, N. J.	24 cases
Buffalo, N. Y.	8 cases
New York, N. Y.	130 cases
Cincinnati, O.	27 cases
Cleveland, O.	133 cases
Toledo, O.	13 cases
Johnstown, Pa.	33 cases
Philadelphia, Pa.	57 cases
Pittsburg, Pa.	94 cases
Scranton, Pa.	9 cases
Providence, R. I.	11 cases
Milwaukee, Wis.	91 cases

These are only a small number of the entire number of cases in the United States, and are selected for the purpose of giving indication of the wide diffusion of smallpox.

Medical News

Edited by H. Judson Lipes, M. D.

ALBANY MEDICAL COLLEGE; OPENING OF THE 72ND SESSION.—The seventy-second session of the Albany Medical College will begin September 23, 1902. President Andrew V. V. Raymond, of the University, will officially open the session and Professor Joseph D. Craig will deliver the address.

ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR JULY, 1902.—Number of new cases, 39. *Classification of cases:* dispensary cases receiving further care, 2; district cases reported by the health physicians, 2; charity cases reported by other physicians, 19; moderate income patients, 16; old cases still under treatment, 17; total number of cases receiving nursing care, 56. *Classification of diseases* (new cases): medical, 13; surgical, 1; gynecological, 22; dental, 3. Removed to hospital, 1; died, 1. Visits of Guild nurses: Number of visits with nursing treatment, 461; for professional supervision of convalescents, 141; total, 602. Cases were reported to the Guild by two of the health physicians, and by 15 other physicians. Dentists, 3.

Special Obstetrical Department: Head obstetrician in charge of cases; medical students in attendance, 3; nurses, 2; patients, 3. Number of visits by obstetrician, 7; by the medical students, 28; by the Guild nurses, 38. Total for the month, 73.

The guild telephone has been transferred to the Guild flat which limits the hours when calls can be received. A Guild nurse will be in attendance to receive orders at the following hours: 8:30 to 9 A. M., 1:30 to 2:30 and 7 to 7:30 P. M. Physicians are requested to report cases at the time thus specified. Only critical cases should be referred after 7 P. M. or on Sunday. Guild telephone 1344F. A Guild nurse can be reached at the South End Dispensary between 11 and 12 o'clock daily.

PROPOSED NEW STATE HOSPITAL FOR THE INSANE.—The State Lunacy Commission expects shortly to begin an active canvass of sites for the proposed new State hospital to be located in Northern New York.

In its annual report the commission called attention to the fact that before many years have elapsed this State will require two or three new institutions for the insane. "The northeastern portion of the State," said the report, "is entirely unprovided with an asylum and very long journeys must be taken by the insane and their visiting friends to reach one of the present State hospitals at Ogdensburg, Utica or Poughkeepsie. A colony for the insane should be located somewhere in the Champlain region. In a few years the State hospital at Flatbush, L. I., must be given up to the county, and a new colony should be organized elsewhere to receive the insane from this asylum. The State has a lease of Ward's Island for some eleven years to come. At the end of that time this island is expected to revert to the city of New York. It may be decided that it is best to remove the 4,000 insane on this island into quarters outside of the city limits. Should this be done there is an opportunity for the organization of two or possibly three institutions for the insane on the colony plan." As the lease of the Flatbush asylum only has two years yet to run, a plan is under serious consideration by the State commission to take the patients now held there and transfer them to Poughkeepsie and to have a new asylum built in Northern New York soon enough to take over the Poughkeepsie patients when they must necessarily be displaced if the Flatbush insane are placed in the Hudson River institution.

The Northern New York territory furnishes some ideal spots for the location of an agricultural colony, and the commission has been greatly pleased with some of the regions visited by its agents in the search for the best place. There are 1,200 insane patients in the counties of Albany and Rensselaer alone, and when it is remembered that Saratoga, Washington, Warren and Essex counties are also poorly provided for, the necessity for the new asylum can be readily seen.

PERSONAL.—Dr. J. L. LOCKWOOD (A. M. C. 1881), has removed from Chicago to Kansas City.

—Dr. S. CHESEBROUGH (A. M. C. 1889), formerly of Glens Falls, New York, is now senior member in a pharmaceutical house and is located at Atalissa, Iowa.

—Dr. M. J. THORNTON (A. M. C. 1901) has recently been appointed resident surgeon at the Soldiers' and Sailors' Home, at Bath, N. Y. After leaving the Albany Hospital, Dr. Thornton was appointed assistant at the Craig Colony for Epileptics. This position he resigned to accept the more lucrative one at Bath. Dr. THOMAS H. CUNNINGHAM (A. M. C. 1900), is resident physician in the same institution.

—Dr. RANSOM J. PERRY, (A. M. C. 1886), has removed from Harford, N. Y., to Whitney's Point, Broome County, N. Y.

—MARRIED.—Dr. LEE SOMERVILLE (A. M. C. 1899), and Miss L. BLANCHE BAKER, at Saranac Lake, N. Y., Wednesday, August 6, 1902. Dr. and Mrs. Somerville will reside at North Creek, N. Y.

—Dr. WILLIAM KIRK, Jr. (A. M. C. 1899), and Mrs. GRACE INGALLS COUNTRYMAN, at Albany, N. Y., August 20, 1902. Dr. and Mrs. Kirk will reside at Troy, N. Y.

Book Reviews

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Paediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, A. M., M. D., Philadelphia, U. S. A., with the Collaboration of JOHN B. MURPHY, M. D., of Chicago; ALEXANDER D. BLACKADER, M. D., of Montreal; H. C. WOOD, M. D., of Philadelphia; T. M. ROTCH, M. D., of Boston; E. LANDOLT, M. D., of Paris; THOMAS G. MORTON, M. D., of Philadelphia; JAMES J. WALSH, M. D., of New York; J. W. BALLANTYNE, M. D., of Edinburgh, and JOHN HAROLD, M. D., of London, with Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume I. Twelfth Series, 1902. Philadelphia: J. B. Lippincott Company. 1902.

A new department appears in this volume entitled "Biographical Sketches of Eminent Living Physicians," in which Dr. Guy Hinsdale contributes concise accounts of the lives of S. Weir Mitchell, M. D., LL. D., and John A. Wyeth, M. D., LL. D.

In "The Use of Opium in Daily Practice" Dr. Arthur V. Meigs calls attention to some effects of opium often neglected at the present time, and does not show as much fear of the opium habit as do many physicians. I. Boas, M. D., contributes an article on "Habitual Constipation," in which he divides the cases into three classes, the spastic, atonic and fragmentary. He states that the methods of treatment are, in the order of their value, the prophylactic, dietetic, mechanical, electrical, thermic and medicinal. Dr. Horatio C. Wood, Jr., concludes his article begun in the last volume entitled "A Description of the Methods of Investigating the Action of Drugs," and Dr. Guy Hinsdale contributes one on "The Climate of New England," which does not accord to that region any great therapeutic value.

In the section on medicine, Dr. Charles E. Simon writes "On the Significance of Basophilic Granules in Red Corpuscles, with Special Reference to their Occurrence in Chronic Lead Poisoning." After reviewing the literature of the subject, he gives the results of his own investigations during the past three years and concludes that the occurrence of these granules is of clinical significance though they cannot be considered pathognomonic of any other disease. In "Gastro Intestinal Autointoxication" John C. Hemmeter, M. D., Ph. D., begins an article, not finished in this volume, which presents arguments against many theories which have been advanced as to the importance of the condition in the etiology of various diseases.

The section devoted to surgery includes the reports of many interesting cases and operations among which are a case of double cola vera presented by John Marnoch, M. A., M. B., C. M.; "Ectopic Tests" By David M. Greig, C. M., F. R. C. S. (Edin.) and numerous operations by Drs. Bayard Holmes, William L. Rodman, and Frederick Griffith.

One hundred and four pages of this volume are given to "Prigress of Medicine During the Year 1901," by Edward Willard Watson, M. D. Koch's views of the non-transmissibility of tuberculosis between man and cattle are contested and experiments and accidental inoculation are quoted to show that human tubercle bacilli are virulent for cattle and that bovine tubercle bacilli produces lesions in man. In consideration of the spread of smallpox the writer concludes that present prevention methods are faulty.

In the discussion of diphtheria the value of antitoxin is conservatively considered and the necessity of great care in its preparation is emphasized. The plague is thought to be a menace to Europe and America, especially as no theory of its spread is yet established, while the prevention of yellow fever has been much advanced by the discovery that the germ is transmitted by mosquitoes. In general surgery the most noteworthy new developments mentioned are the operation for decapsulization in chronic nephritis, the improvements in technique in operating for gastric ulcer and the surgical treatment of cirrhosis of the liver. R. G. C.

Practical Dietetics, with Special Reference to Diet in Disease. Second Edition, Enlarged and Thoroughly Revised. By W. GILMAN THOMPSON, M. D., Professor of Medicine in the Cornell University Medical College, New York City. Pages 828. New York: D. Appleton & Company. 1902.

The fact that this work has reached a second edition shows how highly it has been appreciated. Without doubt no domain of medicine is so important to the patient and so neglected by the physician as is that of dietetics. The *sage* advice too often given to a patient to eat anything that agrees with him or that is digestible would be ludicrous if it were not so often fraught with distress to the sufferer who knows not what agrees with him or what is digestible.

If one had to dispense with drugs or with the indicated dietetics, there are few diseases in which the loss of drugs would not be better borne.

Then, too, as it is the true function of the physician to teach mankind to live aright, he should ever keep before him the fact "that more than half the diseases which embitter the middle and latter part of life among the middle and upper classes of society are due to the avoidable errors of diet."

Although much is heard of the abuse of stimulants it is probably a fact that the foundation of more disease is laid by overeating than by overdrinking. The ancients who regarded *temperantia* as moderation in all things saw more clearly than do many of us.

Part I deals with foods and food preparations. All the elements which have nutritive value are considered together with animal and vegetable products. In Part II the value of stimulants, beverages and condiments is treated. The place of alcohol as a food, tonic and stimulant is thoroughly discussed without bias.

Parts III, IV, V, VI and VII consider in detail cooking, foods required, food digestion, diseases due to dietetic errors and the administration of food for the sick.

Diet in disease is very fully discussed in Part VIII. Although the first impression is that there are too many repetitions in this chapter and that each disease is considered too much in detail instead of being grouped, still there is value in an arrangement which gives the dietetics in each morbid condition.

The last sections deal with relations and dietaries. Among these are the army and navy diets, those of different hospitals, the milk cure, whey cure, fruit cure, etc. The volume will repay careful study and will enable the physician to practice his profession more successfully and scientifically.

Treatise on Surgery. By American Authors. For Students and Practitioners of Surgery and Medicine. Edited by ROSWELL PARK, A. M., M. D., Professor of the Principles and Practice of Surgery and of Clinical Surgery in the Medical Department of the University of Buffalo, Buffalo, New York; Member of the Congress of German Surgeons; Fellow of the American Surgical Association; Ex-President of the Medical Society of the State of New York; Surgeon to the Buffalo General Hospital, Etc. Third Edition, Enlarged and Thoroughly Revised. With 692 Engravings and 64 Full-Page Plates. In Colors and Monochrome. Lea Brothers & Co., New York and Philadelphia. 1902.

It is always a pleasure to see a new edition of Park's surgery. The first and second editions were so complete that it seems hardly possible to improve upon them, but this the third edition has certainly accomplished, and it can be truthfully said that to-day this book is among the leading text-books on surgery in America. The work is divided into six parts, as follows: Surgical Pathology; Surgical Diseases; Surgical Principles and Methods, and Minor Procedures; Injury and Repairs; Surgical Affections of the Tissue and Tissue-Systems, and Special or Regional Surgery. The new chapter on Blood Examination, Applied to Surgery, by Irving Phillips Lyon, M. D., is well written and illustrates the great strides that have been made within the last three years in this, now, most important department of medicine and surgery. The chapters on Surgical Pathology, by the editor, are especially good, and form a valuable text-book by themselves.

This book is to be recommended for its originality, its conciseness, its thoroughness and up-to-date good points. A. V.

Manual of Childbed Nursing with Notes on Infant Feeding. By CHARLES JEWETT, A. M., M. D., Ss. D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital, New York. Fifth edition, revised and enlarged. New York: E. B. Treat & Co., 1902.

This manual, which was originally prepared for the Training School for Nurses at the Long Island College Hospital, was subsequently rewritten for general use, and, although, not a text-book, it is intended as an aid to the nurse to remember the more important points in connection with this subject. The directions are brief and on the while decidedly practical. The importance of frequent examinations of the urine is here brought to the attention of the nurse as well as the mother. The list of articles to be prepared by the patient contains some articles unnecessary and while the suggestions as to the sterilization of such articles would, if carried out, produce an ideal condition, the subject is carried too far, *e. g.,* sterilizing the safety pins. Many valuable suggestions are offered on the care of the child. That "feeble children should not be bathed for several hours and even days after birth, but should be rubbed with sweet oil instead" is good advice but contrary to the opinion of the average lay individual. This little manual is not written especially for mothers but should prove as valuable to them as to the nurse. H. JUDSON LIPES.

Current Medical Literature

OBSTETRICS AND GYNÆCOLOGY

Edited by James P. Boyd, M. D.

The Treatment of Puerperal Infection. (Du traitment de l'infection puerperale.)

PIERRE BUDIN. *L'Obstetrique, July 15, 1901.*

The treatment of puerperal infection has been for more than twenty years the object of numerous researches and of important works. Puerperal infection is due to the presence of pathogenic microbes. Coming in contact at first with the mucous membrane of the vulva, vagina, cervix or uterus, they increase rapidly. The mucous membrane of the body of the uterus, where the elements of necrosis must be eliminated, becomes easily invaded. The microbes and their toxins penetrate into the lymphatic and vascular systems; they attack the peri-uterine cellular tissue, the peritoneum, and soon the entire economy. The infection is then general and and even fatal in a certain number of cases.

Budin briefly reviewed the symptoms accompanying puerperal infection, —the frequency of the pulse, the elevation of the temperature, abdominal pain, spontaneous or provoked by palpation, the variation in the nature of the lochial discharge, *et cetera,* but instead upon the importance which the exploration of the uterine cavity presents. In the normal condition, when the lying-in period is without complications, the internal os is closed after a few days, or one is not able to pass it without some effort. If on the contrary the uterine mucosa is affected it seems that the adjacent muscular fibres are paralyzed and one is able to pass the finger easily into the uterine cavity. There one finds some clots, or placental débris, or at the level of the placental site pieces of projecting tissue more or less easily removed. This débris impregnates the examining finger with a fetid odor. The abnormal permeability of the uterus is then of great importance for diagnosis. When the orifice of the internal os is closed, it is useless to attempt to enter the internal os with much force; one can be almost positively assured that the mucous membrane of the body of the uterus is not infected. It is expected, of course, that in making the examination the operator should have the patient and himself prepared as for a major operation and then there would be no opportunity of infecting an already healthy uterus. If on examination the presence of more or less altered clots, more or less odorous is noted, and if one finds the mucous membrane smooth save at the placental site where the tissues are firm and resisting, all that is necessary to see the temperature lower, and a rapid cure, is to remove these clots, following with an antiseptic douche.

On the other hand, if the finger, which has easily penetrated into the interior of the uterus, finds there placental débris or portions of the membranes, or if one finds that the mucous membranes present at the level of the surface of the insertion of the placenta, projections more or less marked, at times friable and easily separated from the walls by pressure of the finger. In these cases one may be assured that the uterine mucous membrane is infected, and one should have recourse to a digital currettage followed by ecouvillonage. Following this operation the temperature lowers, and the pulse becomes less frequent and the patient improves.

The operative procedure is as follows: the vulva and vagina are thoroughly cleansed, the bladder and rectum emptied. Complete anæsthesia is indispensable because the abdominal wall should be absolutely supple. The patient is put in the obstetrical position upon a pad across the bed; the legs flexed and held by two assistants. One hand having been introduced into the vagina, one or two enter the uterus. The other hand placed upon the abdomen produces constant pressure upon the uterus; the walls can then be easily explored. Any remaining cotyledons are detached or other débris removed. The hand applied upon the abdomen permits of counter pressure, and at the same time acts as a safeguard against perforation of the uterus. After all the débris has been removed an intra-uterine douche of sublimate of one-four-thousandth is given.

In 1885 Dr. Doleris employed in the treatment of incomplete abortion, a sponge made of hair, which resembled the brush used for cleaning bottles. This is now used in the treatment of infection as well as abortion. The sponge is placed in a cold bichloride solution. On entering it into the cervix a rotary motion is employed admitting of a large size easily. Movements similar to currettage are made cleansing the whole surface,—followed by an intra-uterine injection and a digital examination to see if all the débris has been removed. A second or a third application should be employed until the cavity is absolutely emptied. After being completely emptied one or two sponges, that have been plunged into a one-fifth glycerine-creosote solution, are introduced. As this solution is caustic, it is well to make a vaginal injection in order to limit the action of the medicament to the mucous membrane of the body of the uterus. If there is any hemorrhage produced one or two strips of iodoform gauze are introduced into the uterine cavity, and one into the vaginal cavity. The operation is closed by a lavage to the external organs, the application of a vulvar pad which has been wrung out of a sublimate solution. A chill may follow some hours after the operation, followed by a fall of temperature and the diminution of the frequence of the pulse. Some twelve or eighteen hours after the operation the iodoform gauze is removed and an intra-uterine injection of bichloride (1-4000). This should be repeated for two or three days. As soon as the os closes, vaginal injections alone are used. One of the important conditions for success is rapid intervention, especially where there was abundant hemorrhage at the time of delivery, since in this condition the patient offers much less resistance to the infection.

DERMATOLOGY

Edited by F. C. Curtis, M. D.

A Case of Herpetiform Pemphigus,—Cure by Arsenic.

JONATHAN HUTCHINSON. *London Polyclinic, November, 1901.*

The patient was a cab-driver, forty years old, whose severe dermatitis had lasted a month. He had suffered similar attacks in the spring and autumn for several years, though no previous one had been so severe as the last, the one in question. Formerly he had not sought medical advice; he had been able to continue his work. In the attack under consideration, he was quite disabled, all of his lower extremities being covered with crusts, excoriations and ill-formed bullæ. The case was referred by Dr. Corbet Fletcher, who told that he had, at first, prescribed potassium iodid; no benefit being derived from its use, he had discontinued it and substituted arsenic, from which he thought the benefit, within a week of beginning its use, had been quite marked. The man's legs were, however, still so inflamed that he could not stand but needed to be carried. His general health was not affected. The eruption was symmetrical and confined to the limbs. Though much more severe on the legs than on the arms, the latter were not free from it. Long oval groups of small vesicles and excoriations were on the fronts of the arms from the shoulders to below the elbows. They were arranged somewhat in the herpetiform way. The affection on the legs differed from the commoner type of pemphigus in that none of the bullæ were perfect. Indeed they were vesications, rather than bullæ, the epidermis seeming to break as soon as raised; the process spread infectively at the edges of each spot. The whole structure of the skin was involved in the inflammation to a much greater extent than is usual in typical pemphigus. In this respect it resembled the form of pemphigus that is called vegetans. The general aspect of the legs suggested a locally infective process. In determining rational lines of treatment, it was first necessary to decide whether remedies should be directed to internal or external causation. The symmetry of the arrangement, its restriction to the limbs and the fact that the man had had previous attacks, all concurred to show that the eruption was due to some influence brought to bear upon his whole organism. Because former attacks had subsided spontaneously, it seemed probable that the eruption was allied to herpes. We must not allow our conceptions of disease to be restricted by the names we use. Certain forms of "herpes" are allied or introductory to forms of eruption that go by the name of "pemphigus." The dermatitis herpetiformis of Duhring is a sort of connecting link between herpes and pemphigus and, like the latter, may be cured or, at least, closely restrained, by arsenic. The case in question does not at all conform to Duhring's type but is much nearer to that resulting in pemphigus vegetans. Pemphigus vegetans, when once the condition is well declared, although it may be influenced favorably by arsenic, opium and some other drugs, usually ends in death; and one of the most distressing forms of death imaginable. Hence the exigence of zeal in seeking the right interpretation of the facts before us. Arsenic should be tried, first. With it should be combined small doses of opium; if this does not show a beneficial influence very soon, it should be re-inforced by full doses of quinine. The disease must be cured quickly or it will not be cured at all. While relying chiefly on internal medication, we should not be justified in neglecting the possibilities that the dermatitis may be attended by locally infective elements. In a case like that now under consideration, the excoriations should be treated as if they contained infective elements. The crusts should all be removed and parasiticides, as tar, lead and mercury, used in a systematic way. Dr. Corbet Fletcher, who presented this case, reported, three days later, that the patient had rapidly improved under the influence of arsenic. He was practically well and able to resume his work.

[It should, however, be remembered that single cases are not final evidence, however striking the result; but a single experience is of value if the age and other conditions are taken into account in a case of this grave and often fatal disease.—c]

The Light Treatment of Skin Affections according to the Method of Finsen. (Ueber die Lichtbehandlung von Hautaffektionen nach der Finsen, schen Methode.)

LESSER. *Zeitschrift für diätetische und physikalische Therapie, 1901, Band V, Heft VI.*

Finsen had recognized the irritation of light in various diseases and knew that in Roumania and Japan, cases of small-pox were treated in rooms with red hangings and where day light was admitted only through a red medium. The results in these cases was remarkable. There were no formation of pustules, no suppurative fever and the eruption disappeared without scars. Finsen concluded that the blue, violet and ultra violet rays of light had some chemical action upon the eruption of variola. He also determined that these rays had a bactericidal action separated entirely from their heat. From these conclusions he determined to treat lupus in this manner. As the lupus extends deeply into the tissues, it was a question whether the rays of light would penetrate so far and also what action the circulation of the blood would have in hindering their penetration.

There are probably two actions of the light, the inflammatory upon the tissues and the bactericidal.

Finsen in the beginning attributed the major action to the bactericidal, but now believes the inflammatory is the more important. It is reasonable to suppose that any injurious substance acting upon diseased parts will first affect the tissue least resistant and the more effectively the diseased tissue can be destroyed and the healthy structures left unaffected, the more successful is the treatment. Without question the Finsen method is superior to all other local forms of treatment and gives the best cosmetic results.

The source of light is either from the sun or from an electric arc, but preferably the latter, which should possess an intensity of 30,000 candles, a voltage of forty-eight to fifty and a strength of seventy to eighty milleamperes. This light passes through cylinders and is conveyed by lenses between which is distilled water to absorb the heat. The lenses are of crystal and not of glass, which absorbs part of the chemical rays. Two conditions must be kept in mind; that the heat must be absorbed by the water and that the tissue must be rendered anæmic so that the rays may deeply penetrate. The latter is accomplished by the pressure of compressors made of metal and crystal. The compressors must be carefully regulated by trained nurses and no apparatus has been found to take their place.

The eyes af the patient are protected and he should not be conscious of a sensation of strong burning. The duration of each treatment is in general about an hour, but in sensitive patients it may have to be limited to a half hour. After the treatment there is only a lividity and a slight swelling observed and after ten to twelve treatments there is a blister with the diameter of about an inch, then it becomes crusted and after a week or more the inflammatory action comes to an end. The treatment of a severe case of lupus extends from one to two years. No other treatment gives such slight scars or leaves unaffected to such an extent the healthy tissue. There are now many cases which have remained well for several years. The disadvantages are the long duration of the treatment and its expense.

Although lupus is the only disease which has been extensively treated in this manner, favorable results have been obtained in cases of telangiectasis, chancroids, and with less certainty in lupus erythematosus, keloid and in alopecia areata.

In a preliminary communication upon the use of concentrated light in the treatment of dermal affections, W. S. Gottheil briefly reviews the work done by Finsen, Kime and others in this field, and describes the arc light that he employs for the purpose. This is at present the only available source for the actinic rays of sufficient volume and intensity for therapeutic employment. Sunlight is of course the best, and is costless; but it is too uncertain for satisfactory use. No combination of incandescent bulbs, run on the ordinary continuous or alternating commercial current, is sufficiently actinic, and the apparatuses arranged with them practically give us heat and no light baths.

The author employs an apparatus called the Actinolyte, made by Kliegl Bros., of New York, which can be adopted to either the continuous or the alternating current, uses from twenty-five to fifty-five amperes and gives a concentrated circle of light of from 20,000 to 30,000 candle power. He is not prepared as yet to publish his results; but the progress of cases of lupoid and syphilitic ulceration has been most encouraging. The cosmetic results of this non-operative and painless method of treatment are especially good; a point of the greatest importance, of course when the face is involved.—*The Medical News, July 6th, 1901.*

Tonsillotomy Rash.

W. Wingrave. *Journal of Laryngology, October, 1901.*

The author has had thirty-four cases of skin eruptions during the past seven years, following the removal of tonsils and adenoids. Although relatively to the large number of operations this is a small percentage, the author believes that they represent only a portion of those actually occurring. Of the thirty-four cases, three were in patients who developed scarlet fever, while in one, diphtheria developed. The remainder were simply non-specific cases. The eruption generally appears on the second or third day, either papular, roseolous, or erythematous in type. It most frequently attacks the chest, neck, and abdomen, and sometimes extends to the face and extremities. The earliest appearance was the day following the operation, the latest was the sixth day. After reaching its maximum intensity, it rapidly disappears without desquamation, but is sometimes associated with intense itching. As a rule there is only slight constitutional disturbance, and the child does not appear to be any the worse. In the cases that the author was able to investigate personally, the temperature was only raised one or two degrees Fahrenheit. The occurrence of scarlet fever in three cases, and diphtheria in one, has a practical bearing, insomuch that the removal of actively inflamed tonsils is advocated by many surgeons. It may thus happen that tonsillotomy is undertaken in the early stage of recognized or unrecognized scarlet fever, diphtheria or other specific fever, and it is maintained by many specialists, that not only no additional risk is involved, but that it is an expedient course to take. This may be so if tonsils *alone* are removed, but the author doubts the expediency of removing large crops of adenoids in addition, because the formation of such a large denuded surface is not unattended with risk. Several interesting points were brought out in the paper, viz.:

Examination of the blood during the week following operation, afforded evidence in nearly every case of an increase in number of the mononuclear white corpuscles. This leucocytosis, which rarely lasted beyond the tenth day, may be merely coincidental, but it is hardly surprising after so great a disturbance of lymphoid structures. The removal of tonsils and adenoids, likewise affords a very large area for absorption of toxic matter.

LARYNGOLOGY AND RHINOLOGY

Edited by C. F. Theisen, M. D.

Primary Epithelioma of the Antrum of Highmore.

H. Holbrook Curtis. *Laryngoscope, October, 1900.*

Primary epithelioma of the antrum is extremely rare, the only other cases known to the author of epitheliomata arising primarily in the antrum, being those of Caselli and Phillips. The author's case occurred in a woman, *aet.* fifty, who had complained for several weeks of severe neuralgic pains involving the distribution of the fifth and seventh nerves on the left side of the face. There was pain on pressure over the antrum, but no evidence of pus in the ostium maxillare. Transillumination showed an opaque shadow in the vicinity of the antrum of that side. The author first trephined through the alveolar process and obtained a free bloody discharge mixed with brown caseous material. The nasal cavity at that time was apparently healthy and the turbinates seemed normal, but within ten days after trephining the nose became occluded on the left side, and the region of the jaw peculiarly sensitive, swollen and discolored. Patient was removed to a private hospital, placed under ether and a large opening involving the three posterior alveoli and the canine fossa was made. The entire cavity of the antrum was evacuated with curettes and sharp spoon. The floor of the orbit was found to be like tissue paper, and the entire bony walls of the antrum seemed to be spongy and about to break down. The scrapings and portions of the soft growth were examined microscopically and it was found that the mass was composed of a network of new vessels holding within the meshes closely packed epithelial cells. The condition of the patient did not warrant an immediate resection of the superior maxilla. The cavity was syringed with peroxide of hydrogen to counteract the offensive odor, and packed daily with iodoform gauze. From the date of the removal of the growth the invasion of the surrounding structures was very rapid, the mouth being first invaded to the median line of the arch, and then the orbit. At the end of the second week the patient complained of difficulty in swallowing, and the glands of the neck were becoming involved. Patient died six weeks after the evulsion of the contents of the maxillary antrum. The points of interest in the case were: first—the primary invasion of the antrum by the cancer; second—that the growth proved to be an epithelioma; third—that after operative procedure the growth extended with such startling rapidity.

Pathology of Adenoid Growths.

C. W. Richardson. *The Laryngoscope, November, 1900.*

The author divides these growths into two groups, the hard or fibrous type and the soft or gelatinoid type. Those in which the connective tissue is of a succulent type, rich in young cells, surrounding numerous and large masses of lymphoid tissue, are usually soft and readily break down under pressure of the finger. Those composed of masses in which the connective tissue element consists of well-developed fibrous tissue, in which the lymphoid tissue is abundant, and the lymphoid masses are not numerous, are usually firm and tough. The growths are influenced markedly by local inflammation in the nasal and pharyngeal chambers, as well as by disturbances of the alimentary canal. Microscopically the masses show that they do not differ from other glands of the same type in other parts of the body. They are composed almost wholly of a delicate, wavy, connective tissue, rich in lymphoid cells and in blood vessels, numerous sections showing in varying numbers, round, ovoid and irregular-shaped groupings of lymphoid masses, surrounded in most cases with a succulent, reticular tissue, rich in young cells, but of a distinctly fibrous nature. The basement membrane which covers these masses is lined mostly with a columnar ciliated epithelium, and occasionally with a compound squamous epithelium. The author quotes the well-known examination of Lewin, Gottstein and others, who found evidences of tuberculosis in a certain percentage of the growths examined. Thus far nearly a thousand cases have been examined miscroscopically, and in five per cent. more or less pathological evidence of tuberculosis was found. The author, in conclusion, expresses the conviction, that there is some underlying pathological condition, which is responsible for the changes in this lymphoid tissue. In most of the cases, upon careful examination into the family history, it will be found that in the parents or grandparents certain conditions existed which made their impress upon the life of the individual affected.

ORTHOPEDIC SURGERY

Edited by Arthur W. Elting, M. D.

Tuberculosis of the Ankle. (Die Tuberculose des Sprunggelenks.) MAASS. *Archiv für klinische Chirurgie, Bd. LXV, Hft. 1, 1901.*

The writer reviews at considerable length the cases of tuberculosis of the ankle treated at the Göttingen clinic from 1875-1892, numbering in all 167. Somewhat over half of the cases were suppurative and about one-third of them were fistulous. In about seventy-five per cent. of the cases the cartilage of the joint was more or less diseased. In ninety-seven cases in which foci in the bones were carefully sought after, they were found in about sixty per cent. One-half of these bone foci occurred in the astragalus and the other half was about equally divided between the tibia and fibula. In 143 cases, in which notes were made, the ankle joint proper was the only one involved in fifty three and one-half per cent. of the cases, while in forty-six and one-half per cent, of the cases some of the other joints of the ankle were involved. The tendons and tendon sheaths were involved in only seventeen cases. In only two of the cases was there any doubt as to the diagnosis, in both of which the process was very acute.

The most important symptoms are: (1) local pain and swelling; (2) thickening of the bones; (3) fistulæ leading into the bones; (4) deviations of the foot to one side or the other of the median line.

The question of treatment is discussed in considerable detail, the subsequent histories of the patients being in most instances carefully followed.

In thirty-eight of the cases conservative treatment with plaster of Paris was practised. Of these thirty-eight, twenty-nine came to operation later, two were cured, one died unimproved and five were lost sight of. Five methods of operative treatment have been proposed: (1) simple curettement of the fistulous passages; (2) arthrectomy; (3) partial resection with removal of foci in or near the joints; (4) typical resection; (5) amputation.

Curettement was performed in two cases, both of which were cured. Arthrectomy was performed in four cases, all of which were cured. Arthrectomy with removal of bone foci was performed in six cases, of which two were cured. Local foci were removed without opening the joint in nine cases, of which four were cured. Resection with or without removal of the astragalus was performed in 102 cases. In eleven of these cases Langenbeck's operation was done, while in eighty-seven cases König's operation was done. Of the cases operated on by Langenbeck's method in only one was the foot useful in the full sense of the word. Of the eighty-seven cases operated on by König's method forty-one were simple resections, while forty-six were resections with extirpation of the astragalus.

Of the forty-one cases of simple resection, four died after the operation, three of tuberculosis and one of diphtheria. Amputation had to be done subsequently in two cases. Twelve cases were lost sight of. Of the remaining twenty-three, eighteen were cured with useful feet, while the other five could use the feet, but were more or less disabled. All of the patients presented a certain amount of shortening, atrophy and restriction of motion. In the forty-six cases of resection with removal of the astragalus five died, four following operation, three of tuberculosis and one of nephritis. Subsequent amputation was done in eleven cases. Eleven cases were lost sight of. Of the remaining nineteen, seventeen had useful feet, while two were more or less disabled. Following König's operation there was not a case of flail joint or badly-deformed foot.

The greatest amount of shortening of the leg after operation was thirteen centimeters after Langenbeck's operation. Eight and one-half centimeters after König's operation without extirpation of the astragalus, and nine centimeters after König's operation with extirpation of the astragalus.

Scapulo-Humeral Arthrodesis in the Treatment of Paralytic Luxation of the Shoulder. L'Arthrodese scapulo humerale dans le traitement de la luxation paralytique de l'epaule.

BOTHEZAT. *Revue de Chirurgie, Nos. 5, 6 and 7, 1901.*

The writer presents a brief resumê of the general subject of arthrodesis which was first practiced by Albert in 1878. He has collected the statistics of 110 reported cases of arthrodesis of which 103 were practised on the lower extremities and 7 on the upper extremities. There appear to be only six cases of scapulo-humeral arthrodesis in the literature; two by Albert; two by Wolff, and two by Karewsky.

The etiology of paralytic luxation of the shoulder is discussed in considerable detail and the varieties mentioned are the encaphalic, myelopathic, myopathic and neuritic. Those of the most importance surgically are the myelopathic. Anterior poliomyelitis is the chief cause of paralysis amenable to this treatment, although it rarely involves the muscles of the shoulder as illustrated by the statistics of Heine, who found only two cases in 158 cases of anterior poliomyelitis. The clinical features of paralytic luxation of the shoulder are described and different varieties distinguished according to the extent of the paralysis. The two methods of treatment proposed are (1) apparatus; (2) operation. Apparatus is unsatisfactory because of the expense as well as because it contributes to a further atrophy of the muscles.

Some attention is devoted to the mechanics and physiology of the normal movements of the scapula, which after careful analysis are found to comprise movements (1) of rotation, and (2) of translation.

An ankylosis between the humerus and scapula will thus allow the communication of a varied series of movements which can in a measure replace the normal movements of the shoulder. A paralytic luxation of the shoulder suitable for arthrodesis should present the following conditions: (1) the muscular paralysis should be one in no way susceptible to medical treatment and (2) the muscles of the scapula, elbow and hand should be as nearly normal as possible.

The writer calls attention to the fact that muscles are not necessarily completely degenerated when all electrical reaction is gone and discusses at considerable length the subject of electrical examination and its results.

The technique of the operation is described in detail and consists of three steps: (1) the skin incision which begins just inside the acromio-clavicular articulation and extends downward and inward about ten centimeters; (2) incision of the joint capsule and careful removal of the synovial membrane and articular cartilage from the head of the humerus and the glenoid cavity; (3) approximation of the joint surfaces with silver wire and closure of the wound without drainage.

The writer has found that best motion of the ankylosed humerus and scapula is obtained if the humerus is rotated slightly inward and fixed at an angle of 45° to the external border of the scapula.

The writer calls attention to the fact that the traction exercised by the arm in a partially paralysed shoulder is an important cause of atrophy as well as of the absence of improvement after electrical treatment.

The writer reports three cases of complete paralysis of the muscles of the shoulder joint in which he practised arthrodesis with very satisfactory results. In one of these cases a paralysis of the elbow joint of the same arm necessitated an arthrodesis of the elbow which also resulted favorably. In all of his cases the writer states that the ankylosis was firm and bony in character. The function of the arm was greatly improved in each case and the writer strongly urges the more general adoption of this procedure for those cases in which there is a complete paralysis of the muscles of the shoulder joint.

The Operative Treatment of Congenital Dislocation of the Hip. (Ueber die operative Behandlung der angeborenen Huftgelenksverrenkung).

A. Codivilla. *Zeitschrift für orthopädische Chirurgie, Bd. IX, Hft. II, 1901.*

The writer has studied carefully the various factors concerned in the production of congenital dislocation of the hip, and believes one of the most important to be a torsion and anteversion of the neck of the femur, resulting from a pressure exerted upon the legs of the fœtus by the walls of the uterus in cases of oligo-hydramnios. As a result of this the tendency when the legs are extended at birth is to force the head of the femur upward over the upper edge of the acetabulum, thus producing a supracotyloid dislocation which gradually becomes transformed into an iliac as the body weight comes into action. The further backward the head is dislocated the greater the impairment of function. The writer also discusses the importance of the capsule and the muscles as impediments to the reduction of the dislocation and its subsequent retention.

The question of treatment is of great importance and is easiest in early childhood, but becomes more difficult as the patient grows older. An absolutely perfect result is but seldom obtained. In 66 cases reduced by the writer only 4 or 5 were physiologically perfect results, but in practically all the cases the functional result was good. The writer prefers the bloodless method of reduction in all suitable cases and has succeeded in patients as old as 16. In some instances the bloody method alone suffices to correct the deformity. In many cases the result is not a reduction but a transposition of the head forward to the region of the anterior superior spine which the writer shows to be essentially a reluxation, but a position which affords a good functional result. In connection with the reluxation the deformed head of the femur, as well as the deformed acetabulum, must be considered as important factors. The writer advises immobilization of the reduced dislocation in a position of more or less marked abduction for from 6 to 9 months. In cases where there is considerable torsion and anteversion of the neck of the femur he drives a nail through the great trochanter in the direction of the neck of the femur and thus fastens the head, after which a subtrochanteric osteotomy is done to correct the deformity, and the nail is subsequently removed.

From a study of 76 cases of congenital dislocation of the hip treated at the Orthopedic Institute in Bologna from March, 1899, to October, 1900, the writer draws the following conclusions:

(1) In children from three to twelve years of age congenital dislocation of the hip can usually be reduced by the bloodless method. In some cases reduction is possible in older individuals but these are exceptional.

(2) In fifty-three per cent. of the cases the reduction was permanent and the result a good one.

(3) In the other cases luxation occurred but the displacement was less than was originally present and there was more or less functional improvement. These are known as the cases of transposition upward and forward.

(4) The internal rotation can be retained by means of the plaster bandages. In extreme grades of torsion an osteotomy may be necessary.

(5) If the adhesion of the capsule to the ilium and the absence of the upper margin of the acetabulum are the cause of reluxation it can be corrected by loosening the adherent capsule and the periosteum, folding it in, and thus assisting in the formation of an upper margin for the acetabulum and the retention of the head.

(6) If it is necessary to incise the capsule to reduce the dislocation, the method and instrument devised by the writer will be of great service.

(7) If it is necessary to deepen the acetabulum it is advisable to reduce the head of the femur covered with the capsule in order to lessen the probability of ankylosis.

(8) The best incision to expose the hip joint is along the anterior margin of the tensor fasciæ latæ, which incision may be elongated along the crest of the ilium by loosening the attachments of the gluteus minimus and medius to the ilium.

(9) It is best not to drain the wound but to close at once.

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THE INSANE IN NEW YORK STATE.*

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Since the days of Pinel and Esquirol in France, William Tuke in England, and Benjamin Rush in America, all of whom were contemporaneous, the management of public hospitals for the insane has received much attention from the medical profession and a host of non-professional workers in the field of philanthropy, both in Europe and America. The last quarter of the eighteenth century marked the beginning of a new era in the care and treatment of persons who by reason of insanity are unable to retain their place in the body politic, who are obliged to give up their liberty and be sent to institutions designed especially for them. What has been done in the way of reforms and improved methods since that time is a matter of history, and is fully recorded in the medical literature of every civilized nation.

In the State of New York many changes have been inaugurated during the last twelve years with respect to the care of our dependent insane. In the short time at my disposal, I shall refer briefly to the conditions which existed at the time of the passage of the State Care law in 1889, and attempt to describe some of the results which have followed that and subsequent laws which have been enacted, and lastly I shall allude to some of the problems which are at present engaging the minds of alienists everywhere.

In 1889 there were six State Hospitals, including the State Criminal Asylum, and the St. Lawrence State Hospital, which

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***Read before the Brooklyn Society for Neurology, March 27, 1902.**

was then only in process of construction and was not open for the reception of patients. They were Utica, Willard, Hudson River, Buffalo, Binghamton and Middletown, and contained in the aggregate 5,202 patients. The three County Asylums exempted from the operation of the State Care Act, New York, Kings and Monroe, contained 6,970 patients, and there were some 2,240 cared for in almshouses in the various counties throughout the State. A general description of the manner in which patients were treated and cared for in many of the almshouses and other buildings set apart for them by the County authorities at that time is given in the first annual report of the State Commission in Lunacy, but I will mention here some of the conditions observed during a tour of inspection by the Commissioners in 1889, which is taken from their report. It was found in a large number of instances that there was practically no medical supervision, everything being left almost entirely to the "keepers," as they were called. The attending physician would go to the institution only when sent for in some emergency. There was no classification, all sorts and conditions of patients being together. Mechanical restraint of the most severe kind was used extensively and as a rule without being prescribed by a physician. To illustrate, a woman was found sitting in a strong wooden chair, fastened to the floor; a board rested across her lap, hinged to one arm of the chair and fastened to the other by a pad-lock, so that she could not get up until it was removed; an arrangement underneath contained a chamber. The keeper in charge of this patient was a man, and the explanation which he gave for such treatment was that she was uncleanly and would besmear the place with excrement in a few hours, and that the chair had been devised because of this tendency. Several instances similar to this are recorded. Anklets and chains were applied in the case of a man every time he was taken out to work, merely because he was disposed to go home. Many were secluded in miserable rooms without furniture and in a filthy condition. They were waited upon by other insane persons who happened to be confined in the same ward, there being no paid employes to give them attention. Four or five patients used to be bathed in the same water. No records were kept showing their history or condition from time to time. In only two of the larger county institutions was a resident medical officer provided. In one of these the physician was attending the patients in a dining room in place of an attendant at the time of the visit of the Commissioners. His manner and conduct toward the patients was such that they were led to make further inquiries concerning him and afterwards took steps to bring about his removal. As soon as he learned of this he wrote to the Commission asking to be retained, and explained what he considered his fitness for the place. The following is in part what he said: "During the last summer until October, I was obliged to act as an attendant in the men's ward for as many as twenty-four hours per week on the average. Patients are rarely inclined to hurt anyone. When such a thing happens and the patient is a woman, she is simply shut in her room, and in about three cases that I recollect, not allowed to go to the next meal. If she is very violent and the fit is one of ugliness, we either put her in the down-stairs room or confine her in the crib for five or six hours. If she is persistent, violent and maniacal, we strap her to a chair and put on the muff. If the patient is a man who becomes violent in my presence, I choose to deal with him alone. If an attendant is with me I do not wish his help with such cases as I have had experience. I can walk up to any of our men, however violent they may be, and throw them on their backs without striking or hurting them. After this treatment three times out of four they are humbled. If they are not, I let them regain their feet and throw them again, and if this does not answer they are confined to a room." It is needless to say that this man was not retained. These are some of the conditions which created the agitation for State Care, and in the course of two or three years accommodations were provided for all of these unfortunates in the several State institutions.

In the asylums of the three exempted counties things were not so bad. They were conducted more on the lines of the State asylums, but they were not so well equipped and were hampered by certain conditions which existed as the result of the peculiar organizations which controlled them and for which the medical officers in charge were not responsible. The Kings County Asylum, according to the report of the Commission for 1892, seems to have been in the worst condition and was severely criticised on the ground of lack of order and cleanliness, insufficient medical attendance, poor food, insufficient clothing, improperly trained attendants and employes, absence of fire-protection, and insanitary plumbing. These defects, however, had been remedied to some extent at the time of transfer to State control. In 1891 the Monroe County Asylum was transferred to the State; Kings County followed in 1895; and New York in 1896. It was my privilege to experience the transition from County to State care in two of these institutions, viz., Monroe and Kings, and I can therefore speak with some authority regarding the benefits and improved methods which the new regime made possible. The ratio of physicians and attendants to patients was nearly as high as in the State hospitals, but structural conditions and furnishings were inferior. The ward furniture consisted very largely of wooden settees and strap iron bedsteads with straw ticks. These were soon replaced by rockers and arm chairs, and spring bedsteads with hair mattresses. In the dining rooms there were no table cloths and the table-ware was on a par with that of almshouses; the seats consisted of wooden benches without backs. All this was changed; good table-ware was provided, including knives, forks, and table cloths; and the benches were of course discarded. The moral influence of environment is the same in the majority of insane persons as in the case of those who are sane; the quieting and restraining influence produced by good and refined surroundings is well known to those engaged in this line of work. Patients who are careless and untidy at the table, with perhaps destructive tendencies, become more orderly, and will exert themselves to avoid slopping a clean cloth. I need hardly refer to the importance of cheerful accommodations for those afflicted with melancholia in its various forms; anything which conduces to comfort and cheerfulness is important in these cases. Many improvements of a material nature have been made in all of these former county asylums.

The State hospitals now number fourteen, counting the three divisions of the Manhattan and the two divisions of the Long Island institutions as separate hospitals, and the total number of patients in round numbers is 23,000. Whatever may be the faults of the system under which they have been operated during the last ten or twelve years, it must be conceded that there has been a steady advancement in the standard of care and facilities for the application of modern psychiatry. The Utica Hospital was originally established for acute cases only, and Willard and Binghamton for chronic cases. They are now mixed institutions, the State being divided into districts from which each hospital must receive patients when committed. Prior to 1890 some of the older hospitals received a large number of private cases and were under no restrictions as to terms and accommodations. Owing to the large number of patients in county houses awaiting transfer under the provisions of the new law, the Commission ruled that the rate for private patients be limited to ten dollars per week, and that no distinction be made between private and public cases in the matter of accommodations. One result of the present system has been to unify the service. The rules and regulations governing each hospital are the same. Salaries, wages, the number of employes (relatively speaking) and food allowances are uniform. The per capita cost for maintenance has varied some, but this is due largely to varying conditions between the institutions.

The grade of employes has improved, in consequence of the training which they now receive, and a better rate of compensation. The need for trained nurses in institutions for the insane is not of recent conception. It antedates the days of Florence Nightingale. Dr. Maximilian Jacobi, who was at the head of the hospital for the insane at Siegburg, published in 1836 his work on "Hospitals for the Insane" and the views which he then presented are in the main accepted to-day. A few years later Conolly, in England, published his "Teachings for Attendants," and established a training school in the Hanwell institution. That was about the time when general hospitals were giving attention to training schools and when Florence Nightingale was so active. In 1854 Dr. Browne organized a training school for attendants at the Crichton Institution for the Insane, Dumfries, and gave a course of thirty lectures. In America Dr. Bell's "Directions for Attendants" and a similar treatise by Dr. Woodward were published a little in advance of Conolly's work, and subsequently Kirkbride, Curwen and Ray produced books upon the same subject. These early efforts, however, seem to have been attended by comparatively small success, due largely to a lack of comprehensiveness in the course of instruction, and the inability to obtain a suitable class of people to take up the work at the low compensation paid by many of the hospitals. The progress made in this direction in the insane hospitals was not nearly so great as that of the general hospitals. Indeed it was not until general hospital methods were adopted in our institutions for the insane that this work was put on a solid basis. In New York State the Insanity Law of 1895 makes it obligatory to maintain these schools. Utica, Willard and Buffalo had them at the time of the passage of the State Care Act. Our nurses are trained especially in the care of those afflicted with mental disease. It is a specialty in the field of nursing, and a knowledge of nursing in general, of anatomy, physiology, hygiene, dietetics, materia medica, medical and surgical nursing, etc., are just as important in this specialty as is a knowledge of general medicine and surgery to the neurologist or ophthalmologist; the principle involved is the same. General hospitals at the present time afford practically no opportunity for experience or instruction in this line of work.

The ratio of medical officers to patients in the State hospitals is about one to two hundred. This is considered by some members of the profession not engaged in public service to be insufficient. It is larger, however, than formerly, and exceeds that of most European countries, and some of the other states in America. The service is arranged so as to provide special medical and nursing facilities for the acute class and those cases requiring special medical attention. The greatest difficulty which we have to contend with in this respect, and I think it is so to a greater or less extent in all our public hospitals for the insane, is overcrowding. We cannot always furnish such accommodations and that degree of isolation which in many acute cases is desirable. To what extent this interferes with progress towards recovery no one can say, but it is in my opinion, a mistake to suppose that contact between acute and chronic patients is detrimental in all instances. There is a certain class of chronic cases with whom those suffering from acute conditions may associate without any untoward results. It is often impossible to tell when a case is acute and when chronic. There may have been so many recoveries in those who were branded as "chronic," who had been in the hospital for periods varying from four to seven years, that it is now our policy to assume that any chronic case, when no definite organic disease can be made out, may be curable. This embraces mostly those suffering from secondary dementia. Improvement is possible in most cases, if not recovery. One result of the present system has been to provide better means for the so-called psychic or moral treatment, means for diversion and occupation. In addition to the out-of-door employment for men afforded by the cultivation of land and the care of grounds, various industries have been established for the making of shoes, clothing, brooms, brushes, mattresses, etc.; and the printing and book-binding for the entire service is done at two of the hospitals. The sewing rooms, laundry, dining rooms and kitchens afford occupation for a large number of women. Entertainments and dances are given at least one evening of each week during the cool season, and in the summer out-of-doors games. There is also a library in each of the hospitals for the use of patients. Many acute cases require rest and treatment consisting of special diet, massage, hydrotherapy, and medical remedies, but rest in bed is not always indicated, and when it is not it is important to distract the attention of the patient by amusement, occupation, and out-of-door exercise. In low forms of mania, attended with a small degree of exaltation and mild excitement, but where the danger of exhaustion is not to be feared, this mode of treatment is often beneficial, the superabundant energy being diverted into useful and more rational channels. Dr. D. Hack Tuke says, "If idleness is a curse to the sane, it is the parent of mischief and ennui to the insane, and especially to the pubescent and adolescent cases. The lives of the idle insane are miserable and without interest; their morbid fancies riot unchecked, while evil habits, quarreling and destructiveness are all encouraged by the absence of any definite amusement or occupation."

The continued use of powerful cerebral and nervous sedatives is to be deprecated, especially in recent cases. For the relief of insomnia and excitement, wet packs, prolonged warm baths and a judicious diet, with attention of course to the excretions, are of great value. In certain extreme conditions the camisole is indicated and is far preferable to the hypodermic use of powerful narcotics. The camisole is not a severe form of restraint, and its long continued use in a given case is seldom necessary. The practice of administering hypodermically the alkaloids of hyoscyamus was exceedingly common some years ago, when the reaction against mechanical restraint was attracting so much attention. It amounted to substituting chemical for mechanical means. Suicides and accidents, although not always avoidable, are less frequent than formerly.

In speaking of the medical service of the State hospitals it should be mentioned that in addition to the resident officers, there is connected with most of them, particularly those that have the advantage of being located in or near the large centers of population, a consulting staff composed of specialists—surgeons, gynæcologists, dermatologists, and neurologists, of the highest standing, whose services we are able to command whenever circumstances require. They have rendered valuable aid, and are ever ready to respond when called. There is also a visiting ophthalmologist and dentist. Our practice is to give our patients the benefit of treatment at the hands of these skilled gentlemen whenever there is any indication for it; they are entitled to the same consideration in such matters as sane people.

The dietary has received a great deal of consideration. Four years ago Professor W. O. Atwater, of Wesleyan University, who as special agent of the United States Department of Agriculture has charge of nutrition investigations conducted by that branch of the government, and who is a recognized authority on food standards, was engaged by the Lunacy Commission to investigate the matter of food consumption in the State hospitals. He conducted a series of investigations at several of the institutions, and in his report embodies the following statement: "In providing food for the population of a hospital for the insane, two fundamental principles should be recognized. One is that the kinds and amounts of food should be adapted to the actual physiological demands. The other is that these demands differ with different classes of people. A distinction between patients and employes and a classification of patients according to physiological demand are therefore desirable. * * * * * Regarding the actual physiological demand, as expressed in quantities of nutrients and energy of food, comparatively little is known. My own decided impression is that the principal factor is the degree of physical activity. If this is the case, the principle would be the same for the insane as for the people in normal mental condition. I am inclined to think, however, that there are exceptions to this principle; that there may be classes of the insane who eat more and may actually need more, while there are other classes who need less food than people in normal condition with corresponding physical activity." In another part of the report he says, "I have not become familiar with any class of patients whose food requirement seems to me to be in excess of the demand due to muscular or mental activity." The present daily food allowance per capita is as follows: Meats, 10 oz.; eggs, 1; potatoes, 10 oz.; farinaceous foods, 13 oz.; butter, 1.5 oz.; milk, 1 pint, and 1 pint extra for 10 per cent.; cheese, .3 oz.; sugar, 2 oz.; coffee, .5 oz.; tea, .12 oz.; fruits, 3 cents per week for each patient. The dietary is varied to meet the requirements as far as possible. There are three general divisions—the working and active class, the infirm and inactive class, the acute and special medical cases. In the infirmary class, which includes epileptics and some cases of terminal dementia, the meat allowance is reduced. The kitchen and dining room service has been much improved by providing more elaborate cooking facilities, and more employes to manage the work.

It may be asked, to what extent has this improvement in the standard of care increased the recovery rate? There has not been any marked increase in this respect, probably not more than three or four per cent. computed on the number of admissions. Persons afflicted with mental disease are not as a rule committed until their condition has reached a point when it is no longer safe for them to be at large. Consequently many, I might say the majority, are in a chronic state when they reach us, and the number of acute cases received is comparatively small. In many instances the symptoms are so mild in the earlier stage that they may be treated in their homes, but we have no statistics to show what proportion of those so treated recover. Those who go to the public hospitals are in indigent circumstances and the relatives are unable to provide properly for their care at home. The evolutionary period is often overlooked and treatment is not sought until the symptoms culminate in pronounced mental disorder. The question of psychopathic hospitals is one which is at present receiving a great deal of attention on the part of medical men interested in mental disease. It is proposed to have a department for the treatment of acute insanity connected with some general hospital in the larger cities. A movement is on foot to have separate hospitals for this purpose in the Boroughs of Manhattan and Brooklyn for a limited number of cases, about one hundred each. It is desired to have them so organized that patients may be received voluntarily, without the necessity of the regular commitment now in vogue; those cases which are likely to be of long duration, and which for any reason are considered unsuitable to be retained, being transferred to the State hospital in the particular district after the usual form of commitment is obtained. It is hoped that when such hospitals are established patients may be induced to seek admission while the disease is in the incipient stage when it is most amenable to treatment; and that the stigma of being legally adjudged insane and sent to a regular State hospital may in many cases be averted. A department for this purpose is now almost completed at the Albany general hospital, which Dr. J. M. Mosher, formerly of the St. Lawrence State

Hospital, was instrumental in bringing about. A similar institution is soon to be erected at Ann Arbor, Michigan, in connection with the medical department of the university there. Measures are being taken to establish a department for the care and treatment of "early mental disease," or "borderland cases," at the Royal Infirmary, Edinburgh. The London County Council have also under consideration the erection of "reception houses" for early cases of mental disease. Dr. Frederick Peterson, of New York, President of the Lunacy Commission, I believe was the first in this State to suggest this plan in his address before the American Medico-Psychological Association three years ago. In a number of German cities, such hospitals or "clinics" have existed for some time.

The importance of preventive measures is appreciated to-day to perhaps a greater extent than ever before. In Great Britain the number of insane persons is about one in every three hundred of the total population. In New York State it is one in about three hundred and fifty of the total population, and the net annual increase in the State hospitals is between six and seven hundred. This does not include idiots or epileptics who are cared for in institutions set apart for that class of defectives. Prophylaxis must be considered from the standpoint of etiology, but unfortunately the recognized causes in general are in such a nature that the task of removing them seems insuperable. They are the outgrowth of civilization, and insanity is a part of the price to be paid for the conditions imposed by it. Perhaps no more striking illustration of this can be found than the case of the negro in this country. Prior to emancipation, mental disease was comparatively rare in the colored race. The reports of the Census office relating to the colored insane, give the following figures: In 1860 a ratio of 169 per million inhabitants; in 1870, 367; in 1880, 912; in 1890, 886 per million inhabitants. In the state of Georgia the number of colored insane in 1860 was 44, or one to 10,584 of the colored population; in 1870 it was 129, or one to 4,225; in 1880, 411, or one to 1,764; and in 1890, 910, or one to 943. The increase of tuberculosis among the colored people seems to have gone hand in hand with that of insanity, but being an infectious disease it should not be attributed wholly to the same conditions which give rise to the latter. The influence of alcohol in the development of mental disorders is well known. It accounts directly for ten per cent. of admissions to the State hospitals, and is a contributing cause in a still further number. Clouston, in his annual report for the year just closed, states that it accounts for one-fourth of the year's admisions to the Royal Albert Asylum at Edinburgh. The report of the English Lunacy Commissioners of three years ago shows that during the five years 1893 to 1897 inclusive, intemperance in drink was the cause in twenty-one per cent. of male cases admitted to private institutions and twenty-two per cent. of male cases admitted to the public asylums, while in the case of women it was eight per cent. of private and nine per cent. of public cases. Germany tells a similar story. The asylums there report from ten to, in some instances, thirty per cent. as being due to alcohol. According to Kraepelin in 1898 in the Heidelberg clinic thirteen per cent. of the total number were ascribed to this cause; in the men's ward alone the percentage being twenty-five. Efforts have been made by medical men and others in a number of States to obtain legislation to restrict the use of intoxicating liquors, but as yet with little or no success. A few years ago, in England, a proposal of this kind led to the overthrow of a great political party. It is interesting to note the effect of alcohol on the Kaffirs in South Africa as described by Khama, the Bechuanaland Chief. In a letter to the British Commissioner with reference to a demand made by the British South Africa Company that his Kingdom should be brought within the scope of their administration and a railway constructed, he said, "I fear Lo Bengula less than I fear brandy. I fought against Lo Bengula and drove him back. But to fight against drink is to fight against demons and not men. I fear the white man's drink more than the assagais of the Matabili which kills men's bodies. Drink puts devils into men and destroys their souls and bodies." This reminds us of the old colonial days in America when the Indians often became desperate and unmanageable as the result of liquor furnished by the colonists, and to which historians have so frequently alluded. As a civilizing agent it can hardly be said to be a success. Experience indicates too that the children of alcoholic parents frequently suffer from epilepsy and other mental defects. Bad heredity is undoubtedly the most potent factor in the production of insanity, as well as many other diseases. Legislation has been suggested with a view to regulating or preventing the marriage of those mentally defective, but it is a difficult problem and seems beyond solution at present. Syphilis is another frequent cause. If it be true that general paralysis does not exist without it, as some believe, then it accounts for ten per cent. of those admitted to the hospitals in this state, and the proportion is much higher in European countries, to say nothing of certain other mental conditions which are attributed to it. I believe, however, that alcohol plays an important part in many of these cases, but the necessity for preventing the spread of syphilis is obvious. Mental disorder is only one of many morbid and disabling conditions which have their origin in these evils. During recent years much has been accomplished by hygiene, sanitation and antisepsis to mitigate the ravages of certain diseases of a contagious and infectious character formerly so prevalent. The crusade against tuberculosis has just begun. Is it not time for the adoption of more radical measures for the prevention of insanity?

VI. GONORRHŒAL PROSTATITIS, ACUTE AND CHRONIC; ETIOLOGY, PATHOLOGY AND TREATMENT.*

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The classification of gonorrhœal inflammations of the prostate varies with different authors. Most of the American authors recognize only two forms, namely, follicular and parenchymatous. Finger and some of the other European authors recognize another, namely, the catarrhal. American authors simply denominate this latter as gonorrhœa of the prostatic urethra. It is, however, almost impossible to have a gonorrhœal process of the prostatic urethra, limited entirely to the urethral mucous membrane, without involving other structures in an organ so richly supplied with ducts and glands, all of which open upon the floor of the prostatic urethra. In view of the further facts that we may have, a gonorrhœa involving the bulbo-membranous urethra, which entirely recovers, without involvement of the prostatic portion and the more severe grades of inflammation of the prostate, viz., follicular and parenchymatous prostatitis in the majority of cases develop out of this form of prostatic inflammation, it seems but right that this form of inflammation should be considered a distinct entity and described accordingly.

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I shall, therefore, in this paper follow Finger's classification and describe three forms of inflammation, viz., catarrhal, follicular and parenchymatous.

Gonorrhœal prostatitis occurs in about seventy per cent. of all cases of gonorrhœa of the deep urethra. Some authors put it higher than this and some lower, but the average is about as above stated. The disease may occur at any time from one to four weeks after the anterior urethritis has developed. Those cases occurring before the third week, however, are usually due to special exciting causes, such as instrumentation of the urethra, the instillation of remedies into the urethra and irrigation under high pressure, although this might well be classed under the former head, as it is probably not the irritation of the injection but transference of infective material from the anterior to the posterior urethra with the instrument as the medium or with the stream as in the case of irrigation. Beside these causes of the early onset of the disease, there are two others which should be borne in mind; the virulence of the gonorrhœal infection and the resistance of the tissues.

The virulence of the infection in gonorrhœa varies as much as the virulence of the infection in typhoid fever, pneumonia, scarlet fever, diphtheria or any other of the acute infectious diseases, and just as the virulence of these diseases depends upon the concentration of the infection, so in gonorrhœa, a mild infection travels through the urethral mucous membrane slowly, occupying a period of three weeks or more, before the whole urethra is infected, while a virulent or concentrated infection covers the same ground in a week or, perhaps, even less. In the strumous patient, too, an infection which might occupy a much longer time traversing the urethra of a stronger man, a man with more resistance in his tissues, in these patients with their weakened resistance accomplishes the journey much quicker.

Laying aside these specific instances, however, the great majority of cases of prostatitis may be said to occur at about the end of the third week or the beginning of the fourth week of gonorrhœa. At about this time the acute anterior urethritis begins to subside, the discharge from the meatus lessens, becomes somewhat less purulent, and the disease is said to have reached the sub-acute stage; examination of the urethra at this time in a goodly proportion of cases will show that infection of the bulbomembranous urethra has taken place. After this, the proper exciting causes being furnished, acute prostatitis may at any time develop.

Exciting Causes. Perhaps it was a misnomer in the title of this paper to have said the etiology of the disease rather than the exciting causes, because the etiology may be summed up in four words, "infection by the gonococci." Of the exciting causes, however, much more may be said. As the exciting causes in one variety apply in a large degree to all, we may here state them fully in the order of their frequency and importance and avoid repetition when we come to speak of the other forms of the disease:

First, nocturnal emissions during the course of acute urethritis of the deep urethra;

Second, coitus;

Third, indulgence in alcoholics, especially when such indulgence is carried to the extent where it may be denominated a debauch;

Fourth, the causes earlier mentioned, that is, improper instrumental interference with the deep urethra, when in a state of active inflammation (while this is a very potent factor when practiced, I put it fourth in order of frequency because I do not believe it is often practiced by intelligent physicians);

Fifth, any excitation of the genital organs sufficient to cause strong erections without ejaculation;

Sixth, any forms of exercise or reaction which brings pressure and friction to bear over the perineum such as bicycling, horse-back-riding, rowing, during the course of an acute posterior urethritis.

Other causes are given, such as the eating of highly-seasoned foods, the gouty, rheumatic or strumous diathesis. These latter, however, should more properly be classed as predisposing rather than active causes.

It will be noticed that in nearly all the exciting causes here enumerated there is a chance at least for the direct transference of the infectious material from the bulbo-membranous portion of the urethra to the prostatic.

In the cases due to ejaculation either from coitus or pollution, Lydston has shown how it may occur through the aspiratory action of the perineal and prostatic muscles in expelling the last drops of semen. Again, in those cases of instrumental interference as well as in those cases of friction upon the perineum from the seat of the bicycle, of the boat in rowing, and in horseback-riding, the infection is probably by a process of expression squeezed directly from the membranous into the prostatic urethra. In some of these cases of external irritation, however, it may be that by increasing the grade of the inflammation in the membranous urethra the process is led to spread still further, and in this case we get inflammation of the prostate through involvement of contiguous tissue.

SYMPTOMS AND COURSE OF ACUTE CATARRHAL PROSTATITIS

The onset of this form of disease is always rapid, it often developing over night; the patient appearing one day with symptoms of bulbo-membranous urethritis only, and the next morning giving all the evidence of prostatic involvement. The symptoms are almost entirely objective. The patient complains of frequent and painful urination, pain referred to the perineum. Examination of the prostate per rectum is negative; examination of the urine by the three-glass test shows the first portion very cloudy, the second somewhat clearer, and the third again cloudy and containing gonococci, comma-shaped organisms from the prostate, prostatic fluid and often a little blood. This terminal hæmaturia and the comma-shaped organisms accompanied by prostatic tenesmus and frequency of urination is almost pathognomonic of the disease. The inflammatory process is confined to the prostatic urethral membrane and the mouths of the follicles; there is congestion and reddening of the epithelium of the prostatic urethra and swelling of the mouths of the follicles. The discharge is found to contain desquamated epithelial cells, gonococci, pus-cells and prostatic fluid.

The process runs an acute course and may end in resolution or in the follicular or parenchymatous forms.

ACUTE FOLLICULAR PROSTATITIS

This form of prostatitis is usually the direct outgrowth of catarrhal prostatitis. Instead of the inflammatory process confining itself to the superficial structures and mouths of the follicles it spreads along the walls of the follicles. The epithelium lining of the follicle becomes swollen, a purulent catarrh of the epithelial lining of the follicle occurs, the swelling of the lining membrane together with the formation of a mucous plug occludes the lumen of the follicle and retention of fluid causes dilatation of the follicle. After dilatation to a certain point the purulent contents either force their way through the lumen of the follicle or thinning of the walls takes place and the pus breaks through at some other point. When this occurs the site of the follicle is replaced by cicatricial tissue. The objective symptoms of this form of the disease are much the same as in catarrhal prostatitis, except that the pain and feeling of weight in the perineum is greater and the act of urination is considerably interfered with. The stream often being diminished in size and symptoms of prostatic obstruction occur. This form of disease is usually accompanied by moderate temperature, but rarely by a chill.

Palpation of the prostate per rectum may show but slight increase in the size of the organ as a whole, but the examining finger often detects little nodules the size of a pea or larger underneath the capsule and in the substance of the gland. The enlarged and dilated follicles, of course, can only be felt when the deeper follicles just underneath the capsule and at the posterior aspect of the gland are involved.

The secretion in this case shows the same consistency and organisms as in the first form.

The disease may end in resolution or more frequently in the chronic form, or develop into parenchymatous prostatitis.

Acute parenchymatous prostatitis may be secondary to the follicular form or may be due to infection through the lymphatics. When it develops from a preceding follicular inflammation it is either due to the passing of gonococci through the walls of the follicle or the rupture of an abscess, allowing the purulent contents to invade the parenchyma. The invasion through the lymphatics is not difficult to understand when one considers the number and size of the lymphatics of the prostate and their connection with the lymphatics of the penis. The onset of the disease is usually marked by increased desire to urinate a feeling of fullness in the rectum and pressure in the perineum. The discharge from the posterior gonorrhœa is diminished in amount or completely suppressed. An increase in temperature occurs, symptoms of obstruction set in, the stream of urine is diminished in size and greater straining and effort is necessary to completely empty the bladder. The swollen gland encroaches on the rectum and is felt as a smooth tumor from the size of a small egg to the size of an orange; the swelling may be confined to one lobe, but is usually found in both. Defecation is painful, the swollen gland encroaching upon the rectum, acts as a foreign body, and the patient goes to stool often in the effort to get relief. The pain is often described as a boring pain and is referred to the rectum, perineum and urethra. There is a feeling of weight and aching in the loins and thighs. The pain is increased when the patient assumes an upright or sitting position on account of gravitation of blood to the parts and interference with the return circulation. The swelling may increase until the gland is from two to four times its normal size. Complete retention may occur, and resort to the catheter to empty the bladder may be necessary.

In those cases which end in resolution, the disease reaches its height in about one week and then begins slowly to decline, often requiring several weeks or months to reach normal. Instead of resolution, abscess formation may take place. When this occurs, its onset is usually five or six days after the inital onset of the inflammatory process, and is marked by an increase in the temperature, a change in the character of the pain from boring to pulsating and either a distinct chill or continued chilly sensations. Abscess of the prostate may be either single or multiple. Several days elapse before fluctuation can be made out, and the abscess usually points and opens into the urethra or rectum. It may, however, open into any one of a number of other localities, as shown by Segond's interesting table. I shall not take the time in this article to eumerate these localities, but may say in passing, that I have seen one case where the abscess opened into the ischiorectal space. Beside these two methods, parenchymatous prostatitis may end in induration of the gland and, as Ciechanowski's and Brook's investigations prove, be a cause of hypertrophy of the prostate in later life.

This theory of gonorrhœal inflammations of the prostate in early life, causing hypertrophy of the prostate in later life, is not new, but seems to have been indisputably settled by these investigations.

Chronic gonorrhœal prostatitis, parenchymatous and follicular may be the direct outgrowth from the acute forms, or may develop during chronic gonorrhœa of the deep urethra, and pursue a chronic course from the start.

The symptoms in the chronic forms are often not so well marked, and there is not that sharp distinction between the symptoms of the uncomplicated gonorrhœal process in the deep urethra that there is in the acute form. The patient may not complain of any symptoms, especially referable to the prostate, and in this case the diagnosis is only made by a urinary test and the examination of the prostate per rectum. So often is this the case that it is always well to examine the prostate of every patient having a long-continued posterior urethritis which does not respond to the ordinary remedies for uncomplicated gonorrhœa of the deep urethra.

In other cases the symptoms are well marked; they consist in a general way of the same symptoms that mark the acute form only modified by the less active form of the inflammatory process. There is a desire to urinate more often than normal, and the patient usually gets up several times during the night for this purpose, but the symptoms, however, are more urgent during the day when in the standing or sitting position. This is especially so in the early morning and afternoon. There may be some tenesmus at the end of urination, and there is a feeling of weight and soreness in the perineum, perhaps not enough to cause sharp pain, but sufficient to cause discomfort and uneasiness, which may be increased by involvement of the seminal vesicles and ducts. The involvement of these structures may give rise to painful pollutions, and coitus and ejaculation are followed by pain. There is a hyper-secretion and discharge of pathological prostatic fluid. These latter conditions lead the patient to believe that his condition is even worse than it really is, mental depression occurs and all the long train of symptoms, usually denominated sexual neurasthenia, follow.

The symptoms in other cases are almost entirely referred to the rectum and anus, and the patient believes he has hæmorrhoids. Sometimes the symptoms alternate and are referred at one time to the suprapubic region and at another to the rectum. When the pain is referred to the suprapubic region there is generally cystitis complicating the condition from vesical infection. The pain of uncomplicated prostatitis is rarely, if ever, referred to this region. Neuralgia along the spermatic cord and of the testicle is common, and the pain may at times radiate along and be referred to the anterior urethra. At the close of micturition or after ejaculation there is often a feeling of burning and discomfort in the prostatic urethra.

Abscess may form in the parenchymatous variety; great destruction of the glandular and muscular tissue may result and septicæmia and death follow. A few such cases have been reported where almost nothing but the fibrous capsule was found after death.

The pathology varies according to the structures involved. In the follocular form the follicles, ducts and glandular apparatus especially suffer; although it is probable that in all cases in which the disease exists over a long period that all structures become involved to a greater or less degree. The process in this form of the disease is, however, largely confined to the interior of the follicles and the tissue immediately surrounding them. There is dilatation of the ducts and follicles, hyperplasia and epithelial desquamation of the mucus lining and alteration of the prostatic secretion. Instead of the fluid being of normal consistency, which is about that of a watery solution of gum Arabic, it is a dirty yellow, opaque fluid and is made up of prostatic fluid, desquamated epithelium, lecithin and muco-pus. The follicles having been over distended for a considerable time, there is loss of contractility of their muscular coat and stagnation of the contents occurs. There may be, and usually is also, some obstruction of the mouths of the follicles either through narrowing of the lumen nor the formation of a plug occluding the mouth of the excretory duct. The prostatic urethral membrane is usually involved, undergoing more or less thickening and hyperæmia, and the tissue immediately surrounding the gland takes part in the inflammatory process constituting a periglandular inflammation. As this tissue contains the network of capillaries which supply blood to the follicles, a certain amount of stasis occurs and the nutrition and function of the follicle is seriously interferred with. The periglandular structure in the long-standing cases becomes altered in character and may be replaced by an interstitial connective tissue hyperphlasia.

In the parenchymatous form the inflammatory process is more far-reaching in its effects as not only the glandular apparatus but also the muscular stroma and in some cases the connective tissue of the organ are effected. This latter condition constitutes the diffuse form of inflammation, and the prostate, the seminal vesicles, vasa-deferentia, prostatic urethra and the peri-prostatic tissues are involved, causing thickening and induration of all these structures.

Thompson found the gland on post mortem examination sometimes enlarged, in other cases small; the consistency softer than normal; on section the tissues varied in color from a dark red to a violet hue. On pressure a dark red serous fluid mixed with pus was exuded.

In some cases small abscesses in the substance of the glands were found; the prostatic urethral membrane was thickened and injected and the excretory ducts of the gland, as a rule, dilated.

Treatment. I shall not attempt to take up the treatment in detail, as this paper is already too long. There are one or two points in the treatment I wish, however, to make:

First, the early and effective treatment of the acute catarrhal form;

Second, massage of the prostate in the chronic form, particularly the chronic follicular form.

As the severer grades of inflammation usually develop out of the acute catarrhal form, proper and efficient treatment of this variety is at once obvious.

The treatment may be internal, or local, or what is, perhaps, better still, the combination of the two. Of the internal treatment, the drugs which give the best results are the salicylates; salol or sodium salicylate probably being the best. When these drugs are administered in doses of ten grains three times daily they seem to exert a specific influence, probably through their well-known germicidal action. This method of treatment is based on the same principle as the administration of the balsams, cubebs and santal oil in the treatment of specific urethritis, *i. e.,* medication of the affected parts through the urine. Much more efficient, however, is the local treatment either alone or in combination with the foregoing treatment.

This consists in the instillation of a small quantity of a fairly strong solution of nitrate of silver; although most authorities advise against the use of strong medicaments locally during the acute stage. I saw the following method practiced time and again in Prof. Frisch's clinic with only the happiest results. I have since practiced it in all my cases with equally good results.

As soon as the patient presents himself with evidence of prostatic infection an instillation of two or three drops of a one per cent. solution of argent nitrate into the prostatic urethra is made; the next day the same quantity of a two per cent. solution is made and the treatment continued, increasing the strength of the solution one per cent. each day until a five per cent. solution is used. In the great majority of cases all the acute symptoms have now abated. The patient from passing urine every five or ten minutes now retains it two or three hours, and the tenesmus, the cloudy urine and the terminal hæmaturia will have ceased and all of the grosser evidence, at least, of prostatic involvement will have disappeared. The treatment from this time forth may be confined to the continued administration of the salicylates internally and the use of milder remedies locally either through irrigation throughout the whole urethra into the bladder or by the catheter directly into the prostatic urethra.

When the catheter is used for irrigation a word of caution is necessary concerning the technique. Irrigation of the prostate through the catheter should only be done with some urine in the bladder; first, because the solution used should be in a fairly concentrated form and may set up a great deal of vesical discomfort and tenesmus when poured into the empty bladder; second, because with some urine in the bladder we have a guide to tell us when the catheter is in the prostatic urethra.

After irrigation of the anterior urethra in the usual way, the catheter is introduced into the urethra and through the internal sphincter of the bladder until urine begins to flow, then it is withdrawn until the flow ceases. Unless it has been withdrawn too far, the eye now rests between the internal and external sphincters of the bladder or, in other words in the prostatic urethra. When the fluid is forced through the catheter, the internal sphincter of the bladder being weaker than the external, the fluid after its delivery into the prostatic portion, forces the internal sphincter open and passes on into the bladder to mingle with the urine. If, however, the catheter has been withdrawn too far, the fluid runs back along side of the catheter and out of the meatus, showing that the eye of the catheter is not in the prostatic urethra but outside of the external sphincter and in the membranous urethra. The solutions used in this method are potassium permanganate, 1-10,000 to 1-500; protargol, one-fourth per cent. to two per cent.; nitrate of silver, 1-10,000 to 1-5,000. In this connection it is worthy of notice that some of the German and Austrian genito-urinary surgeons are largely confining the use of potassium permanganate to the chronic forms of urethritis and prostatic complications, the drug having fallen into disuse for the acute conditions.

In acute follicular and parenchymatous inflammation the patient should be put to bed and the bowels and diet regulated. Salicylates, boric acid, bromides and hyoscyamus may be given internally and all local treatment through the urethra is here interdicted. Leeches may be applied to the perineum, rectal suppositories containing morphia and belladonna may be used to control pain and saline carthartics administered until free watery catharsis is produced.

In the parenchymatous form the cold coil against the perineum or Finger's apparatus with return flow may be introduced into the rectum against the prostate and a cold current of water run through for an hour and repeated two or three times daily, in this way making direct application of cold to the swollen and inflamed gland. If abscess forms and seems likely to open into the rectum, early detection and incision is desirable; fortunately, however, on account of the resistance of the fibrous capsule of the organ, the greater number of these abscesses open into the urethra and the cavity heals by granulation.

Treatment of Chronic Parenchymatous and Follicular Prostatitis

Patients suffering from this form of prostatic inflammation make up the large majority of all cases coming to the physician for treatment for prostatic disease. These patients visit one physician after another in their search for relief and the disease often lasts over months or years. Neurasthenic symptoms are often added to their other ills and they frequently are the most troublesome patients the practitioner has to deal with.

In these cases where there is depression and neurasthenia, the treatment should be conducted along lines calculated to, first, improve the local condition in the prostate, and second, to improve the general health, and in neurasthenics tone up the weakened nervous tissue.

From the consideration of the pathology of the disease, the indications for treatment can easily be formulated. They are:

First, the emptying of the dilated follicles;

Second, the relief of the stasis in the blood vessels and lymphatics of the organ; and,

Third, the hastening of the absorption of inflammatory products.

Massage, when properly done, accomplishes all of these indications more thoroughly than any other line of treatment.

The treatment par-excellence is undoubtedly massage of the organ in combination with instillations into the prostatic urethra.

While a few cases are found which are either not benefitted by massage or in which the pain is so great that the treatment cannot be pursued, a very large percentage are greatly benefitted and improvement is noted after a very few sittings, although a complete cure may require a course of treatment lasting over several months.

The cases that are not benefitted are probably those in which there is already some organization of inflammatory products resulting in connective tissue hyperplasia and induration. Those in which great pain is produced are probably cases which may be said to be on the border line between the acute and chronic forms or cases in which small abscesses in the muscular stroma exist; that the former is true is proved by the fact that some of these cases which will not stand massaging at the first trial after being allowed to rest a few weeks can receive the treatment and be greatly benefitted by it.

For this reason the treatment should not be abandoned because the first effort proves painful, but after a rest of several weeks should be tried again; if this, too, should prove unsuccessful then other lines of treatment must be adopted.

Massage in order to be effective should be practiced with the patient in the knee elbow position upon an operating table or other firm surface, and the massaging should be from above downward and continued from two to five minutes at each sitting and repeated every second or third day; at the same time instillations of silver nitrate from one-fourth to two per cent. strength may be used or, where no gonococci are present in the discharge a five per cent. cupric sulphate solution. Irrigations of the prostate through the catheter in the same manner and with the same solutions recommended in the catarrhal form may be used here.

For the neurasthenia, bromides, hyoscyamus, valerianates, cod liver oil, chalybeate tonics, sumbul, phosphorus in some form may be used internally with good effect. In case the pains are referred to the sacral or lumbar region, blisters or especially the actual cautery over the painful points are often useful. Galvanism may be of service where the pain is referred to the perineum or covers a wide area. Intercourse and all sexual excitement should be forbidden, alcoholic stimulants, tobacco and all foods or beverages which tend to excite the genito-urinary tract are to be cut off; the food should be bland and nourishing and the clothing light and comfortable. The patient should be ordered to retire early and get a full night's sleep, and a cold sponge bath in the morning with a sharp rub-down following is useful for its general tonic effect. If all these measures have failed to relieve the neurasthenic symptoms, and the local condition has improved to a point where the physician thinks it warranted, a change to the seashore where the patient can enjoy sea bathing if in the summer, or to a warm and equable temperature if in winter, may be recommended.

THE INFLUENCE OF THE DISCOVERY OF THE RELATION OF BACTERIA TO DISEASE ON THE PRACTICE OF MEDICINE EXCLUSIVE OF SURGERY.

AWARDED THE SCHUYLER ALUMNI PRIZE FOR 1901.

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Symptomatology and Course of Disease in General

We will now endeavor to consider the great changes brought about in our knowledge of the symptomatology and course of the various diseases. Assuredly the discovery of the causal relation of bacteria to disease has not influenced the symptomatology and course of disease *per se,* but the study of bacteriology has done much to bring, and is constantly bringing about, a regrouping and rearrangement of those clusters of signs and symptoms by means of which we have been accustomed to recognize the entities called "diseases."

Classes of Diseases

There are three separate classes of diseases which should be reclassified according to the knowledge we now have of the etiology, diagnosis and symptomatology of disease.

Complex Diseases.—First, there are a number of diseases which we formerly supposed to be single well-defined diseases which we now know to be complex, that is, may be of several different varieties, each variety produced by a distinct micro-organism. For example, previous to the development of bacteriology, we thought of acute pneumonia as a single well-defined disease. Now we recognize several kinds of pneumonia, and it is possible, to a certain degree, to differentiate the pneumonias according to their causative agents. In order to elucidate this subject, let us consider pneumonia in detail.

1. "*Pneumococcus-pneumonia* corresponds with the characteristic clinical picture of true croupous pneumonia, with fibrinous exudation into the alveoli, and lobar distribution of the morbid forces. Clinically, this variety is characterized by blood-streaked sputum, and especially by the sudden onset of the disease with a chill, the high, stormy course, and the critical decline of the fever. That this special type of disease is related etiologically to the activity of pneumococci is proved almost with certainty by the following facts: In the first place, in typical cases the diplococcus alone is always found in the diseased area, in which it is demonstrable during life by puncture. In the next place, the general symptoms characteristic of pneumonia are also often present in marked degree, in conjunction with other localizations of the diplococcus, especially pneumococcus-angina. Finally, it may be pointed out in this place that the blood of human beings that have passed through an attack of typical pneumonia with critical defervescence is capable of immunizing animals to pneumococci." Through the researches of bacteriology there is thus furnished evidence that convalescents from this disease are often immune to pneumococci, and it is thus comprehensible why the symptoms disappear abruptly with the occurrence of the crisis, while the pneumonic infiltration remains unchanged.

2. "*Streptococcus-pneumonia* corresponds with the clinical picture of broncho-pneumonia. The infiltrate is only lobular, usually less dense, and associated with less fibrin; the sputum is mucopurulent and not rusty; the onset is not so pronounced; the course is more insidious and attended with remissions and intermissions in the fever (so-called streptococcus-curve) and, above all, the crisis is wanting."

It is not so easy to differentiate this variety, however, since the (3) *staphylococcus-pneumonia,* which is exceedingly uncommon as a single infection, resembles it absolutely; and, secondly, because of the occurrence so frequently of (4) the *mixed forms of pneumonia,* in which two, or even three, of the bacteria named are found together. These forms of the disease furnish clinically also a mixed picture that occupies a position between croupous pneumonia and broncho-pneumonia.

5. *Influenza-pneumonia* is associated with the presence of the influenza bacillus, partly in pure culture, and partly together with streptococci and pneumococci.

6. "The pneumonia complicating tuberculosis in the form of caseous pneumonia may be due to the tubercle-bacillus exclusively. On the other hand, pneumonia dependent upon streptococci, pnemonococci and infiuenza-bacilli is, however, not at all uncommon in tuberculous lungs.

7. The pneumonia complicating other infectious diseases is less commonly due to the cause of those diseases—thus we can understand, for example, the cause of a concurrent pneumonia in typhoid fever. In the sequence of diseases of the abdominal organs pneumonia is often associated with the presence of the bacterium coli.

Thus it is clear that we are beginning to recognize clinical types corresponding to the various micro-organisms, and, perhaps, in the near future we will not have to depend, as we have in the past, upon post-mortem examinations to make clear the different types.

Cabot truthfully remarks: "How much more scientific, how much less like the weather predictions of the Yankee fishermen, our text-books of medicine would sound if we could say" (as we are beginning to do): "Pneumonia, when due to the micrococcus lanceolatus ends by crisis — when due to the streptococcus by lysis"—and what a Godsend it would be!

General Infectious Diseases.—While we have seen how one disease may have different forms, each due to a special organism, we may see the influence of the results of bacteriological studies in the regrouping of diseases by the union of what we now separate as various diseases — meningitis, endocarditis, peritonitis, *et cetera,*—under one heading of general infections. Influenza, tuberculosis, gonorrhœa and typhoid already occupy such a position. Influenza is still influenza, whether it attacks the upper air-passages, the gastro-intestinal tract, or runs its febrile course without any recognizable local manifestation.

Thus we now understand that if we get an endocarditis in the sequence of croupous pneumonia it is undoubtedly due to the diplococcus lancelatus Fränkel, or of the same lesion exists in the course of gonorrhœal infection the gonococcus of Neisser is to blame.

Mixed Infections.—Our knowledge of the symptomatology and course of certain diseases which we now know to be mixed infections has been greatly increased. It is then necessary to point to but one disease—pulmonary tuberculosis—where our conceptions of the symptomatology have been greatly clarified since we began to distinguish the symptoms due to mixed infection with pyogenic cocci or with influenza-bacilli from those due to the activity of the tubercle-bacillus alone.

Prognosis

There is probably no department in clinical medicine where we so often blunder as in forming our prognosis of disease. When we better understand the etiology of disease, and when we can be more positive of our diagnosis, we will likewise be better able to prognosticate the probable termination of any given disease.

Bacteriology is helping us, as we shall see, to make our prognoses less meaningless.

For example, although much depends upon the virulence of the exciting agent and the general condition of the patient, we may look for a fatal termination when pneumococci can be demonstrated in the blood of a case of pneumonia. Also the pneumococcus-pneumonia of tuberculous subjects justifies a more favorable prognosis than a purely tuberculous pneumonia under the same conditions.

In empyema the presence of the diplococcus lanceolatus Fränkel is believed to indicate a much more favorable prognosis than that of the other pyogenic organisms, and is likely to heal after relatively rapid tapping, often without permanent drainage.

Coryza carries a much more serious prognosis if the nasal discharge contains the influenza-bacilli, and if, in the examination of the exudate in tonsilitis, we find the diphtheria bacillus present, our prognosis is less favorable than if the ordinary pyogenic cocci were alone present. But, owing to the great benefit derived from the use of diphtheritic antitoxin, we may now give, if a case is seen early, a very favorable prognosis in a disease which formerly was almost always fatal.

The prognosis if a profuse, rice-water diarrhœa, *et cetera,* is less favorable if on examination of the stools we find the cholera-bacilli.

It has been found that when the spirochetes of a case of relapsing fever are rendered motionless within an hour by the blood of another patient who has passed through one paroxysm and is expecting another, no second paroxysm will occur; while if the spirochetes are not quieted within two hours another paroxysm is sure to follow.

In another way the study of bacteriology has aided us to understand the reason why certain unfavorable prognoses have been made. For example, it has for a long time been a prognostic rule clinically, peculiarly in the case of anthrax, that complete apyrexia is a sign of ill omen. We now know that the fever simply represents a reaction of the organism to the invading parasites, and, therefore, when pyrexia is absent the prognosis is bad.

The most utilized of all bacterial findings for the establishment of a prognosis is when we examine the sputum, perhaps several times to make it a certainty, to determine the presence or absence of the tubercle bacilli in a chronic bronchitis. If these organisms are not found the prognosis is most encouraging.

Treatment

Herteofore the bacteriologist has been compelled to admit that the demonstration of the specific cause in a considerable number of infectious diseases, which had been obtained through his researches, has not resulted in the discovery of a specific treatment for these diseases. But this subject has been so rapidly developed that this admission is no longer correct. We not only now have curative measures unknown before the discovery of the relation of bacteria to disease, but we have most wonderfully developed the more satisfactory preventative treatment.

Besides the development of new methods of treatment, we are now able to comprehend the action of drugs, *e. g.*, quinine in malaria, which were found to be nearly specific in their action. Then, too, we have been able to originate a specific treatment, as for example in hydrophobia, although the causative agent is as yet unknown.

We have found, furthermore, that most diseases are self limited, and, therefore, the duty of physicians is to treat men suffering from different diseases rather than to treat the different diseases themselves.

Quite apart from the psychological factors which, in the exhilaration of exactness are now generally too much neglected, it must be acknowledged that medicine has for a long time shrunk from all questioning about the causes of diseases and cure. In a way, to be sure, the symptoms of disease were considered, but the same prescriptions of large doses of some drug for all symptoms, both great and small, were used. A movement in opposition to this was necessarily provoked and Hahnemann used, for every disease, only one remedy, without reference to the number and succession of symptoms, and he observed that better results followed with small quantities of the remedy than with large doses. The most extreme position was taken by the Viennese school, which Hahnemann still dominated. They rested content with observing the course of the malady without giving anything. Hober and Priessnitz achieved remarkable cures by using ordinary water—a remedy everywhere accessible. In Göbersdorf, a now famous sanitarium, was founded by Brehmer, who adduced strong proof in opposition to the conclusions of medical empiricism of thousands of years, that the dreaded disease, tuberculosis, is curable by hygienic measures. Much credit is due to Semmelweiss, who taught that the terrible malady known as puerperal fever, which exceeded in fatality even smallpox and cholera, could be prevented by simple cleanliness.

Hueppe says that there are very different things which may claim to the cure of disease. The cure of tuberculosis by Brehmer's method convinces us that we can actually cure certain diseases by utilizing those conditions which nature herself furnishes in order to convert a given predisposition toward disease into its opposite immunity. This method makes use of external factors, such as air, water and food, to influence the organism of man, and does not concern itself at all with the disease germs—the tubercle bacteria. Both the cure and the duration of the disease are attained by use of the same hygienic factors. Through this method the natural forces of the organism are strengthened, and the organism itself made capable of dealing with its minute invaders.

A cure of another sort is seen when we successfully combat malaria with quinine. Here we introduce into the organism a substance which in certain quantities is a poison; we cast out the devil by the aid of Beelzebub; we take the risk that, perhaps, we may be introducing so much poison into the body that a disease due to the drug may result. The same thing is true when we treat syphilis successfully with mercury or potassium iodide, or rheumatism with the salicylates. It is assumed by some that such substances act antiseptically, and that their efficiency in the body is due to the fact that they destroy the parasites. Quinine neither paralyzes nor kills the parasite. The latter effect would demand relatively large quantities, while the cure of malaria can be brought about by small quantities. The remedy heals simply because it acts as a stimulus, and temporarily exalts the natural forces of the organism. If the cells of the human body are affected more seriously and in larger numbers by some very severe attack, then stronger stimuli, that is to say larger amounts of the drug, are needed.

The reason why a hot bath will sometimes cut short so-called catarrhal or rheumatic processes is that by such a method, through the intervention of the nerves and by the raising of the body temperature, a temporary increased activity of the natural protective forces of the body are induced.

While the cure of disease is at the present time the more important, the aim of scientific research is to prevent disease. To suppress and remove predisposing conditions and to prepare the body to resist and repel the action of exciting agents, we must not only strengthen its powers of resistence, but also make all external media as favorable to it and as hostile to the exciting causes as possible. The former is produced more particularly by carrying out the laws of hygiene, and the latter by following the rules of sanitary science. Both are included in preventative medicine.

Every change in environment, every considerable change in nutrition, may, therefore, make itself felt by its effect upon our predisposition. By utilizing the information gained from experiments along this line, we have at our disposal a means of influencing the disposition in our favor, as, for instance, by the removal of social mal-adjustments, by improvement of the locality in which we dwell, by changes or metabolism through the introduction of better nutriment, or by regulation of the temperature conditions of the body.

It has always been, as it always will be, an art to preserve health and to ward off disease. Hippocrates, among the first to define principles of public health or sanitation, summed up the knowledge of his day under the six headings: Air, Aliment, Exercise and Rest, Sleep and Wakefulness, Repletion and Evacuation, and the Passions and Affection of the Mind. The Greeks cultivated to the extreme both the physical and mental faculties, and had for their motto *a sound mind in a sound body.* The Romans, in their aqueducts for conveying water to the city, and in the cloaca maxima, have left some wonderful examples of sanitary engineering, which are, in certain respects, not yet surpassed.

The development of hygiene as a science, however, has been within comparatively recent years, and is rapidly attracting popular notice and attention. Its rapid development and its present firm basis is entirely due to the work of the bacteriologists, and the promise of the future is even more brilliant than the results and achievements of the past.

In this, as in other civilized countries, much attention has lately been given to sanitary affairs. The death-rate of most of our cities is being progressively lowered, though the populations are constantly increased by large numbers of ignorant and uncleanly immigrants from abroad. Improved sanitary laws are being enacted and enforced, streets are better paved and cared for, houses more properly constructed and ventilated, more attention given to isolating the sick and protecting the well, and the people in general are awakening to the importance of improving as well as maintaining the public health.

Nevertheless, there is still much to be done. Tuberculosis, which causes one-seventh to one-fourth of all the deaths in the civilized world, as well as a number of other infectious diseases, is a preventable disease, and we now not only know the cause, but also have efficient means for a cure in a large proportion of cases, as well as for its general prevention, which is of far more importance.

Sanatation.—Before we had any knowledge of pathogenic bacteria, sanitarians had obtained, by observation and empirical methods, important data upon which to found their recommendations. Their recommendations were, however, often inadequate and contradictory, and without the authority which comes from an experimental basis.

Before the cause of diseases and portals of infection were known many agents were employed to destroy imaginary germs, which have since been shown to be of little value or that agents of value were used in too small amounts. Exact knowledge of the usual habitat and of the biological characters of a considerable list of pathogenic bacteria enables us to formulate recommendations, which, if carried out, will doubtless go far toward eradicating the disease induced in man by these infecting agents. For example, the demonstration that tuberculosis is an infectious disease due to a bacterial parasite—the bacillus tuberculosis—at once leads to the recommendation that this bacillus be destroyed wherever it may be found external to the bodies of infected individuals.

Prevention of Tuberculosis.—The fact that it is present in the sputa of patients suffering from tuberculosis, in the milk of cows, and in the tissues of tuberculous animals, leads to a more specific recommendation that the sputa of tuberculous patients should be disinfected; that cow's milk from an unknown source should be sterilized before it is used as a food; and that the flesh of tuberculous animals should not be used as a food.

Prevention of Diseases in Children.—The sterilization of milk, water and food products has done much to eradicate and to prevent disease. There is nothing so important nor productive of such results as the prevention of various diseases in children, particularly in artificially fed infants, as the proper preparation, and this by sterilization, of their food which is largely milk. Tyndall is largely responsible for the working out of this method of pasteurization as it is now termed.

The disinfection of houses after a contagious disease, the isolation of patients suffering from such conditions, when strictly carried out, will do much toward eradicating specific diseases, as was evinced in the recent epidemics at Memphis and New Orleans, and more lately in our own city. Typhus fever has almost entirely disappeared through the enforcement of sanitary laws, and through the technique of the surgeon the dreaded hospital gangrene is no more.

Some one might argue that certain diseases are now more frequent, notwithstanding our present knowledge and practice. This may be true, for children who would have died of smallpox in the eighteenth century now live to be affected with diphtheria or scarlet fever, and the increase in the number of deaths reported as due to cancer is partly due to the fact that a greater proportion of people live to the age most subject to this disease.

Even if we can not command the distinction of pathogenic bacteria, we can at least fortify the human organism so as to prevent bacterial invasion. According to Bachman (Monatsche. f. prakt. Wasserheilk.), micro-organisms either settle upon degenerated tissue, from their invading living tissue and set free their toxins, or directly form poisons from the products of degeneration (auto-intoxication). These products of regressive metamorphosis are especially derivatives of the blood (nekrocytes). Important in understanding the nature of infectious disease is the biological principle that organisms only spread where they find their proper food. As healthy body tissue cannot furnish a soil for microbes, there only remains to consider the used up, cast-off cell material still remaining in the tissue.

Preventative Medicine. — Preventative medicine is therefore concerned in the removing of this material, and all measures which are able to do this must be looked upon as universal therapeutic agents, as baths, mineral waters, hydrotherapy, massage, all cathartics, diaphoretics, diuretics, expectorants, *et cetera.* The basis of most diseases consists in products of decomposition, among which the derivatives of red blood corpuscles play the chief rôle. Pus, mucus, exudates, etc., are of their origin. The business of hygiene, as also of therapy, consists especially in the overcoming of these products of regressive metamorphosis. In this way decomposition will be prevented, which results in the formation of toxine, and in the second place removes the food upon which the micro-organisms flourish.

The future generations, unless the trend of evolution is changed, will doubtless exist without teeth. The proper care of the teeth is of great hygienic importance and should be insisted upon more thoroughly. Their destruction is due to the acids formed in the mouth as the result of bacterial decomposition, and this could be most easily prevented.

The vastly increased importance to humanity, which the mosquito and other insects have assumed during the past year, renders all that pertains to these pests particularly interesting at the present time. This subject developed entirely by the bacteriologist through the discovery of the fact that these insects carry the disease germs from one source of infection to another, is already bearing practical results in the destruction, as far as possible, of these scavengers.

Action of Bacteria.—The researches of bacteriologists have established the fact that the pathogenic action of the bacteria, which have been shown to be concerned in the etiology of specific infectious diseases, is due to the formation of toxic products during the active development of the bacterial cell.

Toxins and Toxalbumins.—The discovery of these toxins and toxalbumins has led to a line of research work which has been productive of great results. It was demonstrated that the blood serum of certain animals possesses decided germicidal power. It was further shown, by Ogata and Jasuhara, that the blood of an immune animal injected into a susceptible animal shortly before or after inoculating it with a virulent culture of the anthrax bacillus, protects the animal from a fatal attack of anthrax, and that after its recovery from the mild attack which results, the animal is immune against the action of virulent cultures. It is evident that these facts, now so well established, have immense significance from a therapeutic point of view.

The experiments of Behring and Kitasato showed that the blood of animals which have an artificial immunity against tetanus, or against diphtheria, when injected into susceptible animals, preserves them from fatal infection with virulent cultures of the bacillus of tetanus or of diphtheria. Further, these bacteriologists have shown that the toxic substance—toxalbumin—present in a filtered culture of the tentanus bacillus is neutralized by mixture with the blood of an immune animal.

Treatment by Use of Anti-Toxins.—The value of the treatment of disease by anti-toxins was early established in traumatic tetanus with tetanus anti-toxin prepared by Cautani and Tizzoni, the noted Italian observers.

With these practical and beneficial results no physician will fail to recognize the fact that medical science has taken a new departure, and that bacteriological studies have led up to practical results of the greatest importance.

Nature's Cure.—Why is it that we now consider many diseases to be self-limited, and how is this phenomena produced? It is nature's own cure. The production of an anti-toxin during an attack of any one of the infectious diseases would account for recovery in non-fatal cases. If nature adopts this method of cure, we but follow her if we seek to introduce more of the anti-toxin for the purpose of arresting the progress of cases of unusual severity and fatal tendency.

Besides the greatly improved methods employed in preventative medicine, and the immense change produced by the results of bacteriological study in the general treatment of disease, we now have a special mode of counteracting the effect of disease germs by antitoxic or protective sera. These new therapeutic agents vary greatly in their value, and while only a few are markedly curative, the utility of others in selected cases is of importance. The developments in this department are so rapid that we anticipate valuable additions to our means of treatment in the near future.

In producing and using these sera we are simply following out the vis naturæ. Nature uses one remarkable method of transforming a predisposition to disease into immunity, and it has been utilized also as a means of curing disease. That the patient who has successfully recovered from certain "specific" infectious diseases becomes protected from a second attack has been known for many years. Thucydides recommended that those who had recovered from the plague at Athens, and had thereby acquired protection, should be employed in the care of the sick. This old idea remains still, and mothers even at the present time adopt the practice of exposing their healthy children to certain infectious diseases with the expectation that the children, when thus exposed intentionally and artificially to the infection will contract the disease in a milder form than the more susceptible children who have previously sickened in a natural way, but that the children thus deliberately infected will gain the same amount of protection as the others.

Induced Smallpox. — Artificially induced smallpox was customary in India and China years before the cause of the disease was even conjectured, and was introduced from Constantinople into Western Europe by Lady Montague (1717-1721). European physicians learned the art so well that only an inconsiderable proportion of those treated died of the artificial smallpox inoculation, while an enormous number of men ordinarily perished with natural small-pox.

A Holstein teacher, Pless, and, above all, the English surgeon, Jenner, developed the method of systematic inoculation with the supposedly independent virus of smallpox. The first official inoculation is supposed to have been performed May 14, 1796. The starting point of the serum therapy is the observation that animals, after being successfully infected, regain their health when treated with a subcutaneous injection of the serum of immunized animals.

The method of immunization by means of the blood-serum of immunized animals was first suggested by Richet and Héricourt, and devised by Behring and Kitasato. Though demonstrated by the investigators named as useful only for staphylococcus septicæmia, as well as for diphtheria and tetanus, this method is now employed against the infections due to other bacteria.

(*To be concluded*)

Editorial

> Jefferson was sceptical as to the science of medicine, and discussed the subject with the same interest that he did theology and politics. He believed in a vegetable diet and in permitting nature to "reëstablish order" in the human system when any of its organs or functions were deranged. "Experience," he says, "teaches that there are certain substances by which, applied to the living body, internally or externally, nature can be assisted, and thus accomplish in a short time what nature would do slowly. So far," he continues, "I bow to the utility of medicine, but here the judicious, the moral, the humane physician should stop. But the adventuresome physician goes on and substitutes presumption for knowledge. He forms his table of nosology, arrays his diseases into families, and extends his curative treatment by analogy to all the cases he has thus arbitrarily marshalled together."
>
> William Eleroy Curtis.
>
> *The True Thomas Jefferson.*

Pure Milk

A contribution to the "Prophylaxis and Treatment of Summer Diarrhœa," by Dr. Henry L. K. Shaw, in the *Monthly Bulletin* for July, of the New York State Department of Health, adds value to that periodical. Dr. Shaw refers particularly to the dangers of contaminated milk, and its place in promoting intestinal disorders. He emphasizes the need of protection against improper food, and activity in this direction rather than in the use of drugs. He says of drugs:

> Little success has ever been attained by the use of the various astringents and intestinal antiseptics. Antisepsis in the intestines is impossible. Asepsis can be approximately obtained by starving and removing the bacteria. Subnitrate of bismuth in large and oft-repeated doses is sometimes beneficial. Opium should be avoided and is of service only where there is severe tenesmus (straining and colic) with frequent movements.

Readers of the ANNALS may recall that a committee to investigate the milk supply was appointed by the Medical Society of the County of Albany last spring, and their report is expected at the semi-annual meeting in October. Its substance is possibly foreshadowed in the contribution by Dr. Shaw, in which is stated:

> The Milk Commission of the Medical Society of the County of New York place thirty thousand bacteria per cubic centimeter as the maximum for certified milk. In Albany twenty examinations from the best dairies

showed a minimum count of eighty-eight thousand, and the highest number was over two million and a half to a cubic centimeter.

These two statements present the issue, and there can be little doubt that ultimately so-called therapeutics must yield here, as in other cases, to the plain indications of prophylaxis.

The ANNALS has recently received a circular advertisement of "High Grade Milk," which is of interest in this connection, as showing what is accomplished in our larger cities and what should be required in every community. The reasons for which this commercial enterprise claims the support of the public are as follows:

1. The cows have been tested for tuberculosis and carefully examined as to healthfulness in general.

2. There is a special milking room apart from the stable. This room has a cement floor, and contains no bedding of any kind to create a dust. The floor, walls and ceiling are sprinkled with water before each milking.

3. The cows are well groomed and the udders thoroughly washed. The milk first drawn is rejected. Then the cows are removed from the stable to the milking room, where maids attired in costume similar to that of hospital nurses draw off the milk with clean, dry hands. The milk pails have an aperture of scarcely more than three inches. Before reaching the pail the milk passes through a silk gauze which is placed over the top of the pail just below the cover, a freshly sterilized gauze being used for each cow milked. At each milking freshly sterilized outer garments are worn by the maids. All utensils also are sterilized.

4. Refrigerating machinery is employed in preference to ice for the rapid and effectual cooling of the milk.

5. The milk is filled into thoroughly cleaned, steam-sterilized bottles, at the farm. These are sealed with paraffined caps, and further covered with tin foil, which protects the caps from dust and prevents the entrance of bacteria to the milk.

6. The general manager is a physician, bacteriologist, and chemist, and the farm superintendent is a bacteriologist. The presence of either one of these intelligent men at each milking is an assurance that the interests of the consumer shall always be safeguarded.

These are the measures which assure pure milk, and by such simple means the development in milk of dangerous organic poisons may be inhibited. When this knowledge shall have been disseminated by physicians, and the public demands these precautions, unclean barns and unhealthy cows will cease spreading disease and death throughout the land.

Scientific Review

SOME RECENT MODIFICATIONS OF THE TECHNIQUE OF BLOOD EXAMINATION

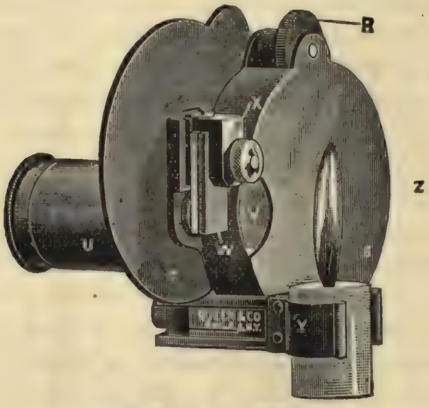
Every device which renders it more practicable for the physician to make satisfactory blood examinations without using a great deal of time, or necessarily possessing long experience in such work, should be welcomed. During the past two or three years there have been introduced a number of instruments and methods that make it possible to obtain quickly very useful results.

Preparation and staining of the blood film. The most satisfactory method for many purposes of studying the blood is in the fresh specimen unstained, at the bedside, but often it is impracticable to carry a microscope with one, and whatever study is made of the film must be done with a dried and stained preparation. The method introduced by Ehrlich of using films prepared by receiving a drop of blood on a clean cover-slip, to which is applied another cover-slip, and separating the two quickly, has long been used. To obtain the best results with this method the cover-slips must be absolutely clean, and a considerable amount of dexterity in the process of correctly separating them must be acquired. A beginner is much more likely to obtain films which can be satisfactorily studied, by the use of slides, a method which has come into vogue recently (1). A drop of blood is received upon an ordinary glass microscopic slide near one end. The edge of another similar slide is then applied to the drop and drawn along over the surface of the first slide, spreading the drop out into a thin film. Howard and Pakes (2) use the following modification of this method: The blood is collected on a bit of paper, and is spread along the surface of the slide. Cabot (3) has tried various kinds of tissue paper, and has finally accepted the cigarette paper as the most convenient. Some of the advantages of the slide method are that every specimen can be successfully spread, no forceps are required and there is no danger of breakage. The specimens do not need to be mounted in balsam. They can be examined directly and are consequently less likely to fade, and after being used they may be restained. They can also be safely fixed in the free flame of a Bunsen burner, while cover-slips prepared according to Ehrlich's method require special methods of heat fixation.

Staining of the film. Practically all methods of staining blood films have required fixation of the film as a separate step. Absolute alcohol, alcohol and ether, and formalin solutions have been used, and for certain purposes, heat. There has recently been introduced a stain (4), which eliminates fixation as a separate step in the process, and thus saves time. *Jenner's* stain already prepared may be obtained from the dealers. It is used as follows: Cover-slips or slides with the blood film upon them are placed in the stain; in one, two or three minutes the stain is rapidly poured off, and the specimens washed in *distilled* water until the film has a pink color, which usually occurs in five to ten seconds. They are then dried by agitation in the air and examined at once. They should not be blotted between filter papers. The stain is prepared by mixing 125 cubic centimeters of a one-half per cent. solution of Grübler's watery eosin (yellow) in absolute methylic alcohol, and 100 cubic centimeters of one-half per cent. solution of Grübler's medicinal methylene blue in absolute methylic alcohol. The nuclei and the various granules of the leucocytes are well differentiated, and blood plates, bacteria and malarial parasites are clearly stained.

The methods used for studying malarial parasites and demonstrating the chromatin of malarial organisms have been rather complicated. The Romanowsky and Nocht methods, while giving beautiful results, have required long fixation, certain brands of methylene blue, prolonged staining, and a final mixture of the stain just before use. Dr. L. B. Goldhorn (5) has recently introduced a new and rapid method for demonstrating the chromatin of the malarial organism, and his stain has also been found very convenient for routine examination of blood films. This stain may be bought already prepared in the shops. The method of use is as follows: The film is fixed by immersion in methyl alcohol for fifteen seconds. This time has been found to be amply sufficient, and this method of fixation in itself is more rapid and convenient than any of those formerly used. The specimen is next placed in one-tenth per cent. solution of eosin for seven seconds, then in the Goldhorn stain for one minute. This method is especially recommended when it is desired to study the finer changes in the blood cells. The chromatin in the malarial parasites is well demonstrated, and the granular degenerations occurring in red cells are beautifully shown. Various degrees of polychromatophilia are sharply distinguished. The composition and preparation of the stain is as follows: Dissolve two grams of ordinary methylene blue in 300 cubic centimeters of water. Shake. Add four grams of lithium carbonate. Shake. Pour into an evaporating dish over a water bath. Allow the boiling water to touch the bottom of the dish. Stir and decant after fifteen minutes into glass stoppered bottles, using cotton in the funnel instead of filter paper. Set aside for a few days and slightly acidify with a four or five per cent. solution of acetic acid. Add enough of saturated aqueous solution of lithium carbonate to make the stain slightly alkaline. The entire procedure of staining by this method consumes less than two minutes.

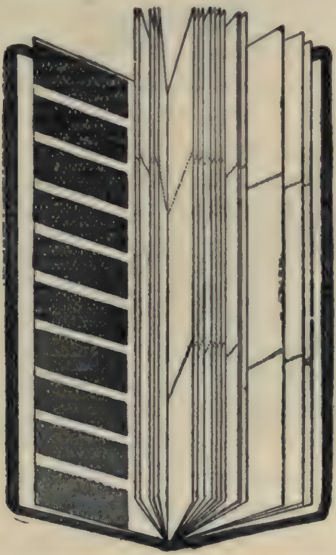
Estimation of haemoglobin. For a long time the instrument in most general use for determining the percentage of hæmoglobin has been von Fleischl's hæmometer, and it has given quite satisfactory results. There are some disadvantages, however, connected with its use. The capillary blood pipette is a fragile glass tube requiring most careful handling. The dilution of the blood requires experience, and takes time. Leucocytosis often interferes with the reading, making a turbid appearance in the preparation. The observation must be made by artificial light in a dark room or camera box must be used. Miescher's modification (6) is somewhat complicated.



DARE'S HAEMOGLOBINOMTER

The new hæmoglobinometer which has been devised by Dr. Arthur Dare (7) overcomes some of these difficulties. Undiluted blood is used. This is drawn by capillary attraction between two slabs of glass, one transparent, and the other translucent, to diffuse the light. The color of the blood is then compared with different portions of a circular disc of colored glass moved by means of a thumb screw so that different tints are brought side by side with the blood tint. A candle is used for light, and the observation made through a camera tube which excludes extraneous light. Some of the advantages of the instrument are: dilution is dispensed with; leucocytosis does not interfere with the reading; allowance is made for the color curve, while with the von Fleischl's there is a variation of twenty per cent. in color included in the bit of colored glass compared with the blood. No dark room is needed. The instrument can be used and cleansed very rapidly.

Tallquist's Hæmoglobin-Scala (8) consists of a little book of blank blotting papers, with which is bound a paper color scale of ten tints. A drop of undiluted blood is soaked into the blotting paper, and as soon as the humid gloss has disappeared, and before it has thoroughly dried, it is compared with the color scale. It can not be used by artificial light. It is claimed that hæmoglobin determination can be made with an error of no more than ten per cent. as compared with von Fleischl's or other standard instruments. The outfit is very inexpensive, and its simplicity must appeal to every one. Cabot (3) says that



TALLQUIST'S HAEMOGLOBIN–SCALA
(By courtesy of the Arthur H. Thomas Company.)

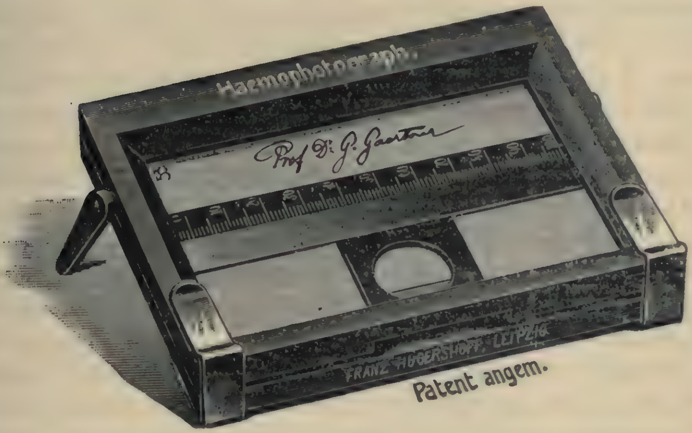
it can be used by any one with sufficient accuracy for practical purposes, and with a celerity that makes hæmoglobin estimation no more of an undertaking than feeling the pulse.

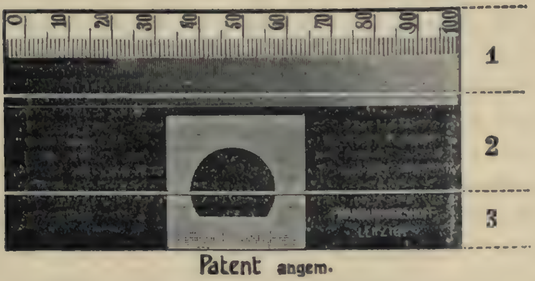
Gaertner's hæmophotograph (9) is an ingenious apparatus consisting of a printing frame containing a glass photographic plate representing the values in black and white of a graduated color scale like the glass wedge of the von Fleischl's instrument. Attached to the glass plate is a cell which contains about one centimeter of blood, diluted so that a one per cent. dilution is used. A photograph is made by printing on a piece of sensitized paper through the glass plate, and the portion of paper which has been affected by the light passing through the blood is compared with that printed upon by the light passing through the scale. Various pipettes and a plate for facilitating the comparison of shades accompany the instrument. The advantages claimed are accuracy of reading, identity, not similiarity of color being the test. Differences between two blood solutions not detected by direct observation can be made in this way. It is possible to file the results as permanent records. The price is about one-third that of the von Fleischl instrument. Tollens (10) has compared the results given by it with those given by Miescher's modification of the von Fleischl hæmometer, and considers it nearly as accurate an instrument.

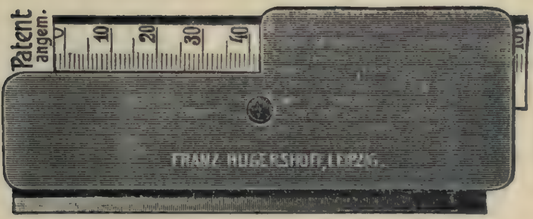
The counting of blood cells. The Thoma hæmocytometer is still considered the most accurate instrument for recording the number of red blood corpuscles. There has, however, been introduced an instrument which determines quite accurately the volume of red corpuscles without the use of the microscope, and when the corpuscles are normal in size gives a fairly accurate indication of their number. Oliver's (11) hæmocytometer is founded on the following principle: When a candle flame is viewed through a glass tube containing water a transverse line of bright illumination is seen, consisting of the closely packed images of the flame produced by the longitudinal fibrillations of the glass. When some fixing fluid is added to blood the mixture presents a certain degree of opacity, according to the amount of blood or fixing fluid. This opacity completely shuts out the view of the line of illumination until on diluting further a definite point is reached when it can just be detected as a delicate streak of light across the tube. Repeated observations have shown that

To Illustrate Dr. Laird's Scientific Review on "Some Recent Modifications of the Technique of Blood Examination."

Albany Medical Annals, October, 1902.







GAERTNER'S HAEMOPHOTOGRAPH

the development of this line is a delicate indicator of the percentage of red blood corpuscles. Dr. Cabot (3) considers the instrument accurate and useful in many cases. It is impossible to make an estimate of white corpuscles with it. Baumgarten (12) considers that Cabot over-estimates its clinical value, inasmuch as variations in the size of the red blood cells and coagulation of the proteids of the blood by the mercuric chloride in Hayem's solution used for dilution introduce elements of error. He does not consider it reliable below four million red blood cells.

In connection with the Thoma blood counter, there have been made some improvements. The counting plate that usually accompanies the apparatus consists of 400 small squares, which taken together cover an area of one square millimeter. In the counting plate as modified by Zappert (13), besides the 400 small squares in the center of the plate, there are eight squares, each a millimeter wide, which surround this central block, in all an area of nine square millimeters, which may be counted instead of one square millimeter as in the original counting plate. These eight large squares are not subdivided into small squares, and, therefore, are not used when the red cells are estimated, but are extremely convenient when the count is made of the white cells. Dr. Wilhelm Türk (14) has still further modified the Zappert plate by subdividing the eight large squares. Using a diluting solution containing gentian-violet he finds that he is able to make a differential count of the leucocytes at the same time that he is estimating the number per cubic millimeter, thus greatly shortening the time consumed by one blood examination.

Determination of coagulability of the blood. Wright's (15) coagulometer has of late been extensively used for the determination of the coagulation time of the blood. The necessary apparatus consists of about half a dozen capillary tubes of approximately equal calibre. The blood is drawn into these and the coagulation time is determined by blowing down one tube after another at regularly increasing intervals until the tubes are found to have become blocked by clot. In the summer time or when the temperature in the room is practically that of the blood no further apparatus is necessary. At other times the tubes should be kept surrounded by water at the temperature of the body. Arrangements for keeping them at this temperature accompany the instrument.

ARTHUR T. LAIRD.

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Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, AUGUST, 1902.

Deaths.

	1901	1902		1901	1902
Consumption	18	13	Apoplexy	6	9
Typhoid fever	3	3	Bright's disease	14	8
Diphtheria and croup	2	2	Cancer	6	9
Whooping cough	0	1	Accidents and violence	7	5
Pneumonia	0	2	Seventy years and over	15	16
Broncho-pneumonia	2	2	One year and under	25	16

DEATHS IN INSTITUTIONS

	1901	1902
Albany City Hospital	7	18
County House	1	2
Home for Aged Men	4	0
Home of the Friendless	0	1
Homeopathic Hospital	2	2
Hospital for Incurables	1	0
House of Shelter	0	1
Little Sisters of the Poor	1	0
Public Places	2	1
St. Margaret's House	8	1
St. Peter's Hospital	6	6
Albany Jail	0	1

Total number of deaths this year for August	126
Total number of deaths for August, 1901	134
Death rate for August, 1902	14.25
Death rate less non-residents dying in institutions	13.46
Death rate for August, 1901	15.16
Death rate less non-residents dying in institutions	12.67

Births	106	*Marriages*	51

It is to be noticed again, the diminished number of deaths from consumption, thirteen deaths this year as against eighteen deaths a year ago. During July there were seventeen deaths from consumption, this year, as against seventeen a year ago. During June, there were fourteen deaths from consumption this year, as against twenty-six a year ago. In other words, for three months this year, there were forty-four deaths and last year during the same period sixty-one, or a saving of seventeen lives. The low death rate for Albany during August, is also to be noticed, the resident death rate being 13.46, and the entire death rate 14.25.

WORK OF HEALTH PHYSICIANS.

Total number of assignments during the month	49
Total number of calls made during the month	162
Number of vaccinations made	2

INSPECTIONS.

During the month one hundred fourteen markets were inspected, three milk rooms, eighty milk peddlers, four water peddlers, twenty fish peddlers, five fish markets, three cow stables and one ice wagon. There were found two milk peddlers' violations, one water peddler's violation, two fish peddlers' violations, and one cow stable violation.

Total number of complaints during the month was seventy-seven, of which sixteen were for privies, seven for closets, nine for drains, nine for defective plumbing, one for wells and cisterns, eight for water, three for filthy yards, one for filthy alley, three for filthy premises, four for manure nuisances, five for chicken, one for dog, three for garbage, two for stagnant water, one for dump, one fish, one for smoke and two on acount of offensive odors. There were found to be abated during the month thirty-seven nuisances, and thirty complaints were made without cause. Thirty-one cases were referred to the Commissioner of Public Safety for action, and seventeen cases were brought to a hearing before the Commissioner.

There were two hundred and eighty plumbing inspections made during the month, of which one hundred eighty-one were of old buildings, and ninety-nine of new buildings. Fifty-five iron drains were laid, thirty-three connections with street sewers, forty-one tile drains, ten urinals, sixty cesspools, ninety-four wash basins, seventy-one sinks, fifty-eight bath tubs, thirty-nine wash trays, thirteen trap hoppers in yard, one hundred and three tank closets. One hundred and four permits were issued, of which seventy-eight were for plumbing and twenty-six for building purposes. Twenty-four plans were submitted to the department for approval, of which twelve were for old buildings and twelve for new buildings. Twelve houses were tested on complaint, of which four were tested by blue or red test and eight by the peppermint test. Twelve water tests were made. Fifty houses were examined on complaint, of which forty were valid and ten without cause, and fifty-three houses were re-examined.

CONTAGIOUS DISEASE REPORT.

	1901	1902
Typhoid fever reported	24	9
Scarlet fever reported	4	5
Cases of diphtheria and croup	27	20
Chickenpox reported	0	2
Measles reported	1	1
Whooping-cough reported	0	0
Consumption reported	19	0

Number of days quarantined for diphtheria:

Longest........51 Shortest........ 6 Average........20¼

Number of days quarantined for scarlet fever:

Longest........21 Shortest........ 7 Average........37½

Fumigations:

Houses .... 18 Rooms 45

It is to be noticed here, that the average number of days quarantine for diphtheria is about twenty-one days, and for scarlet fever thirty-seven days, which shows still a saving for those under quarantine, of a number of days, when compared with the old method of quarantine.

BENDER LABORATORY REPORT.

Cultures for diphtheria:

Initial, positive	Initial, negative	Release, positive	Release, negative
16	10	9	8

Failed..................8

Total number of cultures........................ 51

DIPHTHERIA MORTALITY IN DENVER DURING TEN YEARS.

Before antitoxin was discovered:

Year	Cases	Deaths	Mortality per cent.
1889	233	109	46.5
1890	720	277	38.6
1891	468	175	37.4
1892	300	89	29.7
1893	318	106	33.3
1894	233	71	28.7

SINCE ANTITOXIN WAS INTRODUCED:

Year	Cases	Deaths	Mortality per cent.
1895	248	40	16.1
1896	246	19	7.7
1897	297	43	14.5
1898	386	34	8.81
1899	257	25	9.72
1900	207	14	6.76

NUMBER OF CASES OF TYPHOID FEVER AND DEATHS FROM SAME REPORTED FROM JANUARY, 1890, TO AUGUST, 1902.

		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1890	Reported....	3	10	10	4	6	11	3	8	6	9	5	18	93
	Deaths......	11	5	4	5	2	3	1	7	5	1	4	5	53
1891	Reported....	202	137	71	20	10	4	7	10	28	21	25	45	580
	Deaths......	18	24	15	9	7	2	2	5	5	4	3	6	100
1892	Reported....	16	18	15	16	10	4	9	21	19	11	16	27	182
	Deaths......	4	5	6	2	1	0	1	4	2	1	7	3	36
1893	Reported....	16	19	27	24	17	7	18	12	11	13	5	6	175
	Deaths......	4	4	6	10	4	1	1	3	1	3	1	6	44
1894	Reported....	18	17	29	15	16	5	6	13	9	17	14	37	196
	Deaths......	5	3	6	3	4	6	1	6	3	0	2	4	43
1895	Reported....	15	64	169	111	20	8	25	24	21	60	146	122	785
	Deaths......	4	12	18	22	11	4	9	4	8	4	10	13	119
1896	Reported....	108	60	62	14	17	20	19	27	36	23	22	30	438
	Deaths......	19	8	14	3	2	5	5	5	8	2	3	1	75
1897	Reported....	36	29	46	29	24	38	11	62	26	44	56	34	435
	Deaths......	8	8	7	8	2	4	5	8	9	8	7	6	80
1898	Reported....	77	34	27	11	3	12	40	117	57	64	41	34	517
	Deaths......	10	8	8	4	3	1	3	20	6	5	7	11	86
1899	Reported....	67	94	127	62	24	23	31	20	25	23	10	9	515
	Deaths......	10	12	12	11	3	6	2	4	0	4	1	4	69
1900	Reported....	7	11	13	7	8	4	8	19	37	18	21	14	167
	Deaths......	3	0	3	5	4	3	3	5	4	3	4	0	37
1901	Reported....	25	7	9	3	2	2	4	24	21	11	4	6	118
	Deaths......	2	3	1	2	2	3	0	3	4	0	0	1	21
1902	Reported....	9	3	6	9	7	4	9						47
	Deaths......	2	3	2	1	2	2	1						13

ANTI-VACCINATION AMENITIES.

A month or so ago the "Massachusetts Anti-Vaccination Society of Boston, Mass.," sent out a printed circular, in an endeavor to arouse the prejudice of the people against the efficacy of vaccination. This circular was headed:

"How Cleveland Stamped out Smallpox without Vaccination

"Facts for Thoughtful Citizens

"Within the past year, the country has been given an object lesson on the subject of smallpox and vaccination, of which every citizen should know and on which every citizen should ponder. It is the history of smallpox and vaccination in the city of Cleveland, O., and demonstrates how, when vaccination failed, sanitation and disinfection succeeded. The facts are given in a letter from Dr. Martin Friedrich, Chief of the Cleveland Board of Health, to the editor of the *Arena* (April number), and states how the work was accomplished. The following are extracts from the letter:

"'It affords me great pleasure to state that the house-to-house disinfection freed Cleveland from smallpox. Since August 23, 1901, to this very hour of writing, not a single case has originated in this city, but seven cases were imported. *The disease raged here uninterruptedly since 1891.* We relied upon vaccination and quarantine as the most effective weapons to combat it, but in spite of all our efforts it doubled itself every year, and was in a fair way of repeating the record of last year, as in 1900 we had 993 cases, and from January 1st to July 21st, 1901, the number amounted to 1223. On this date, I was called to take charge of the health office, with seventeen cases on hand. . . .

"Vaccination has given us many untoward symptoms. Frequently it did not "take" at all. One fourth of all cases developed sepsis instead of vaccinia. Some arms swelled clear down to the wrist joint, with pieces of flesh as big as silver dollars, and twice as thick, dropping right out, leaving an ugly suppurating wound, which to heal took, in many cases, over three months. Finally four cases of tetanus developed after vaccination, so that the people became alarmed, and rightly so.

"'I laid these facts before Mayor Johnson and proposed to stop vaccination entirely, and instead of it, disinfect thoroughly with formaldehyde. I formed two squads of disinfectors, preferring medical students for the work. Each squad consisted of twenty men, with a regular sanitary patrolman at their head, and each man was provided with a formaldehyde generator. Thus equipped they started out to disinfect every section of the city where the disease had shown its head, and every house in this section, no matter if smallpox had been within or not, and every room, nook and corner of the house, special attention being paid to winter clothes that had been stored away, presumably laden with germs. Along with this the regular sanitary police force was given orders to make a house-to-house canvass to tell the public to clean up their yards, barns and outhouses, and abate all nuisance that could be found. It took over three months to do the work, but the result was most gratifying. * * * As a result Cleveland is now free from smallpox, and from the worst infected city it has become the cleanest.'"

The above statement is most instructive to believers in the efficacy of vaccination, in the light of subsequent developments, which it is hoped this Anti-Vaccination Society will give to the public for their information. The Marine Hospital Service in its last issue, gives 532 cases of smallpox and 73 deaths from the same, in the city of Cleveland, O., from June 1st to August 30th of this year. This is more than one-third of the total number of cases of smallpox in the entire state of Ohio, for the same period, and is three-quarters of all deaths occurring in the same state for the same period of time, and this is

"How Cleveland Stamped out Smallpox without Vaccination."

Medical News

Edited by H. Judson Lipes, M. D.

ALBANY MEDICAL COLLEGE ALUMNI ASSOCIATION OF CENTRAL NEW YORK.—The second annual meeting of this association was held on September 24, 1902, in Syracuse. The following members were present: Drs. Tefft, Stevens, Brewer, Fuller, of Utica; Johnson, of Mexico; Gardner, of Ellisburg; Edsall, of Middleville; Scully and Bernstein, of Rome; Cusick and Bacon, of Fulton; Slingerland, of Fayetteville; Quackenbush, of Trenton; and Kellogg, Knapp, Harter, Brust, Lewis, Heddon and Fairchild, of Syracuse. After the address of President W. Clinton Kellogg, M. D., of Syracuse, on "The Early History of the Albany Medical College," and the transaction of some routine business the following officers were elected for the coming year: President, Dr. Charles Tefft, of Utica; first vice-presi ent, Dr. Thomas Scully, of Rome; second vice-president Dr. Frank L. Harter, of Syracuse; third vice-president, Dr. J. S. Edsall, of Middleville; fourth vice-president, Dr. George P. Johnson, of Mexico; fifth vice-president, Dr. W. K. Quackenbush, of Trenton; sixth vice-president, Dr. George Gardner, of Ellisburg; secretary, Dr. F. H. Brewer, of Utica; treasurer, Dr. Earl D. Fuller, of Utica.

After the business session, Rev. Jeremiah Zimmerman was the guest of honor at the banquet. The new president, Dr. Tefft, acted as toastmaster and called for the following toasts: "Our New Association," Dr. Thomas Scully, '85; "The Medical Profession," Dr. F. H. Brewer, '78; "Some Reminiscences of Our Alma Mater," Dr. M. B. Fairchild, '68; "The A. M. C. Alumni Spirit," Dr. Charles Bernstein, '94; "The Physician in Public Life," Dr. J. W. Knapp, '72; "The Physician's Motive," Rev. Jeremiah Zimmerman, D. D., LL. D.

SMALL-POX IN THE CITY OF ALBANY.—At the monthly meeting of the heads of city departments in the mayor's office September 19th, Health Officer Craig sent in a report that the city was free from small-pox for the first time since last spring. At the previous meeting in August the disease was practically stamped out, but two other patients who had recovered still remained under surveillance, which has since been removed.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR AUGUST, 1902.—Number of new cases, 46. *Classification of cases:* dispensary patients receiving further care, 2; district cases reported by health physicians, 4; charity cases reported by other physicians, 18; total number of charity cases, 24. Moderate income patients, 22. Old cases still under treatment, 16. Total number of patients under nursing care, 62.

Classification of diseases: (new cases) medical, 11; surgical, 3; gynæcological, 32. One contagious disease in medical list. Removed to hospital, 3; died, 8.

Visits of Guild nurses: Number of visits with nursing treatment, 437; for the professional supervision of convalescents, 126; total 563.

Cases were reported to the Guild by two of the health physicians and by twenty-one other physicians. The report of the Special Obstetrical department for August will be given in the report for September.

BUSINESS COMMITTEE OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.—The Secretary of the Medical Society of the State of New York, Dr. F. C. Curtis, announces that the President of the Society, Dr. Henry R. Hopkins, has appointed the following Business Committee: Dr. Ernest Wende, 471 Delaware Avenue, Buffalo, chairman; Dr. Hamilton D. Wey, Elmira, and Dr. J. M. Mosher, Albany. This committee will have charge of the program of the next annual meeting, which will be held in Albany, January 27-29, 1903.

HEALTH OF THE UNITED STATES ARMY.—The report of the surgeon-general of the army for the year ending June 30th last shows a gradual improvement in the condition of the health of the troops. Many were subjected to exposure in the Philippines. The report states that the admissions to sick report in 1901 constituted 1791.59 per thousand of the strength as compared with 2311.81 in 1900 and with 1502.47 the mean annual rate of the previous ten years. The rate of discharge for disability was 19.95 in 1901, as compared with 22.60 in 1900 and 16.69 for the decade and the death rate from all causes was 19.94 per thousand men as compared with 22.74 and 11.91 per thousand men respectively. Deaths from disease constituted 9.58 per thousand of mean strength as compared with 15.79 in 1900, and deaths from injury 5.36 as compared with 6.95.

STATE PRISONS AND THE BERTILLON SYSTEM OF CLASSIFICATION.—State Prison Superintendent Collins several years ago adopted the Bertillon system for the identification of criminals in the prisons of this state. Dr. Robert B. Lamb (A. M. C., 1891), some years ago discovered discrepancies in the measurements made in the state prisons and declared that in some prisons the measuring was not done carefully and exactly, hence uniformity was not secured. A meeting of the measuring experts was held and careless departure from the precise standard were corrected and measuring was then put on a definite mathematical basis. While Dr. Lamb, who is now medical superintendent of the Dannemora State Hospital, was assistant physician at the Matteawan State Hospital he photographed and measured the patients when they were received under the Bertillon system for the identification of criminals. The Bureau of Identification at Albany now contains more than 15,000 of the identification cards which makes the largest and most complete "rogues' gallery" in the United States. In order to embrace in the bureau operations the latest and most improved methods of classification, Charles K. Baker, chief clerk of the State Prisons Department, and Dr. Lamb were sent to investigate the prisons in Belgium and Paris and the original Bertillon Bureau. Dr. Lamb has recently returned from his trip and finds that the examination of the Paris method of classification of cards will aid very much in the facility and speed of handling the great volume of identification cards in the Prison Department at Albany.

TETANUS ANTITOXIN.—The director of the State Antitoxin Laboratory, Dr. Pease, contributed an article on Tetanus Antitoxin in the June *Bulletin* of the New York State Department of Health which is especially worthy of note.

The State Department of Health now furnishes Tetanus Antitoxin, prepared and tested in its Antitoxin laboratory, under the following regulation:

It is to be supplied for the treatment or immunization of any of the following persons:

Inmates of state institutions.

Inmates of other charitable institutions located in New York state.

Persons residing in this state unable to purchase or obtain the remedy.

Antitoxin prepared and distributed by this department is not to be sold under any circumstances.

Physicians obtaining antitoxin for use as above noted, must agree to report the results from its use on the proper blank.

Those entitled to receive the remedy under the above schedule should apply as follows:

State institutions to the State Department of Health, Albany.

All others to the health officer of the city, town or village where they are located or reside.

The serum will be distributed in two forms. A small vial containing twenty-five cubic centimetres, or less, will be sent out for use as a preventive or immunizing agent. Larger bottles containing from fifty to several hundred cubic centimetres, intended for the treatment of cases of tetanus, will be forwarded upon application by letter, telegraph or telephone to the Antitoxin Laboratory, State Department of Health, Albany.

While the results obtained from the use of antitoxin in tetanus have not been as favorable as was at first expected, a study of the reported cases and statistical reviews clearly indicates that the death rate has been lower in those cases where it has been used. How much has been accomplished is hard to estimate correctly. In many reported recoveries attributed to the use of antitoxin the diagnosis has been without doubt erroneous. There is unquestionably a natural tendency to report recoveries, but to say nothing about the failures.

We are at present in the position where the remedy should be used in every case where it can possibly be obtained, and it is the intention of the State Department to make such use possible. As soon as it can possibly do so a supply of both diphtheria and tetanus antitoxins, sufficient for beginning the treatment of at least one case of each disease, will be placed in the hands of every health officer in the state for use when needed. This will permit an early start in the treatment of a case, and allow sufficient time for a further supply to be sent for and received.

General Paresis, Practical and Clinical.—Under this title P. Blakiston's Son and Company announce a book by Dr. Robert Howland Chase, physician-in-chief of the Friends' Asylum for the Insane, Philadelphia.

Personal.—Dr. R. W. Bell, Jr. (A. M. C., 1892), is located at Claverack, N. Y.

—Dr. E. W. Baltes, (A. M. C., 1897), has removed to 414 Silver Avenue, Albuquerque, New Mexico.

—Dr. E. E. Whitehorne (A. M. C., 1878), may now be addressed at 175 Main Street, Batavia, Ill.

—Dr. J. H. Struble (A. M. C., 1869), formerly at Hawley, Penn., has recently removed to Passaic, N. J.

—Dr. A. J. Blessing (A. M. C., 1886), has removed to 219 State Street, Albany.

—Dr. Gerald Griffin (A. M. C., 1901), has resigned from the House Staff of the Albany Hospital in order to enter private practice in this city. Dr. Griffin will occupy the former office of Dr. A. J. Blessing, at 114 Grand Street.

—Dr. Fred E. Lettice (A. M. C., 1902), of Sprout Brook, N. Y., has been appointed to fill the vacancy made in the House Staff of the Albany Hospital by the resignation of Dr. Griffin.

—Dr. Howard Miller (A. M. C., 1881), formerly of Ravena, N. Y., announces that he has purchased the Meyer Pharmacy, on the corner of Eighty-third Street and Amsterdam Avenue, New York City.

—Married.—Moore-Williams.—At Albany, N. Y., on Wednesday, August 27, 1902, Dr. James Manning Moore (A. M. C., 1894) and Miss May Williams.

Book Reviews

The Diagnosis of Surgical Diseases. By E. Albert, Late Director and Professor of the Surgical Clinic at the University of Vienna. Authorized Translation from the Eighth Enlarged and Revised Edition by Robert T. Frank, A. M., M. D. New York: D. Appleton & Company, 1902.

As indicated by the fact that it has run through several editions on the continent this volume has come to be regarded as one of the standard works upon surgical diagnosis. It is, therefore, with pleasure that we welcome its translation into English which will bring it into a much greater field of usefulness. It is rather a striking fact that while there are a large number of excellent works on medical diagnosis, but very few have as yet been devoted exclusively to the subject of surgical diagnosis.

In this volume of 419 pages the author has presented in a brief, but interesting fashion the more important points connected with the diagnosis of those conditions which are usually regarded as of the greatest surgical importance. The general subject is covered in 39 chapters in which the diseases are grouped more with reference to similarity of symptoms and points of resemblance than according to any special classification. Each of these chapters is devoted to a consideration of the symptoms and diagnosis of the conditions which may occur in the region under discussion, as for instance in the chapter devoted to "Injuries of the skull and brain and their primary sequelæ," the more important features to be noted are discussed as well as the conclusions to be drawn from the presence or absence of certain symptoms. The differential diagnosis is also carefully considered. In many instances clinical cases are described in illustrating the characteristic symptoms of certain conditions and these are always well presented.

The volume is written in the style of the lecturer, each chapter being practically a clinical lecture more or less profusely illustrated with case histories. This gives the work a certain terseness and brevity which makes it interesting reading.

This style also has its disadvantages, for it introduces certain elementary features which, while of value to the student, are not of so much interest to the surgeon.

The illustrations, of which there are 53, are well chosen and fairly well executed. The translation is an excellent one and the translator has evidently succeeded in putting into clear and concise English both the words and the meaning of the author.

The publishers have as usual done their full share in the art of bookmaking and have produced an attractive looking volume.

As already stated, the work is especially adapted to the needs of the student and will certainly impart to him much valuable information relating to the diagnosis of surgical diseases. A. W. E.

Massage and the Original Swedish Movements: Their Application to Various Diseases of the Body. By KURRE W. OSTROM, from the Royal University of Upsala, Sweden. Fifth Edition. Revised and Enlarged, with One Hundred and Fifteen Illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1902.

This manual describes the technique and the range of application of massage and Swedish movements. It is clearly written in good English and properly illustrated to show the details of the manipulations. The author is frank in setting forth the limitations, as well as the uses, of massage, and the physician who cares to make use of this means will be able, by reading this book, to select a qualified masseur, and to practice understandingly. Incidentally he will learn the basis upon which pretentious "rubbers," and "osteopaths," seek to establish a science of healing from a minor department of therapeutics. The author writes strongly against the abuses and gives the following conclusions as to the remedies:

"1. That the massage and movement treatments should be applied only by educated and properly trained persons, with due regard to the physician's directions.

"2. That the operator (if not a medical doctor), should be of the same sex as the patient.

"3. That there should be a place where skilful and trained operators could have an opportunity for passing an examination and for registering, thus protecting not only themselves and the profession, but the *general public* as well."

Current Medical Literature

SURGERY

Edited by A. Vander Veer, M. D.

Post-Operative Hæmatemesis, with Notes of Eleven Cases. ROBERT PURVES. *Edinburgh Medical Journal, March, 1902.*

The author has been able to obtain particulars of twenty-nine cases of the thirty-seven published, since von Eiselsberg's first communication upon the subject in 1899. Eleven cases have also been collected from the records of the Royal Infirmary, and recorded in detail. After a description of the mode of onset, duration and nature of the hæmatemesis, and the general condition of the patient, the writer discusses at some length the etiology. *First,* the administration of the anæsthetic has been suggested; *secondly,* laparotomy has been associated with the occurrence of hæmatemesis, but it has occurred in connection with other operations, as upon the palate and amputations; *thirdly,* vomiting after general anæsthesia; *fourthly,* fasting before an operation; *fifthly,* injury to the stomach or duodenum by surgical handling, resulting in the possible formation of ulcers; *sixthly,* thrombosis of the omental vessels after injury or ligature, followed by embolism of the wall of the stomach and formation of ulcers; *seventhly,* sepsis, producing small gastric or duodenal ulcers; *eighthly,* a nervous reflex influence, and *ninthly,* the pressure of gauze packing on the bile ducts and portal vein. Reviewing the claims for each one of these opinions, the writer does not believe that any one can be fully sustained as a sole cause. In a certain number of cases hæmatemesis can be attributed to gastric ulcer or rupture of a vessel, where atheroma or cirrhosis of the liver is present, and in such cases it is no doubt precipitated by chloroform sickness. Injury and a non-infected embolus may account for some cases. Where these explanations are not possible, and this includes the majority of cases, the writer believes that the origin is of an infective nature. In many cases the association with sepsis is clear, but in others, where the absence of conclusive signs of septic infection exists, where there is no sign of gastric ulcer, cirrhosis, or atheroma, where no ligature of omentum has been performed, the condition is probably one in which a transient infection has occurred, the only obvious evidence of which is the hæmatemesis. In some cases the appearance of a suppurating parotitis or a small abscess after several days, indicates the relation of the hæmatemesis to an infective process.

The prognosis is always grave, and may be regarded as follows:

1. The more marked the septic reaction is in a case—as shown by discharge from the wound and temperature—the better is the chance of recovery.

2. Subdued or masked infection, with subnormal temperature and rapid pulse, a rapidly increasing vital depression, the vomiting tending to become regurgitant—all these render the prognosis graver.

3. If bilious vomiting appears *after* one or two hæmatemeses, the prognosis is favorable. The only three cases in which this sign appeared recovered.

This treatment is similar to that of septicæmia.

The Prognosis of Suture of Nerves. (*Ueber die Prognose der Nervennaht.*)

P. Speiser. *Fortschritte der Medicin, xx, 5, 1902.*

This is a collective investigation of the recent literature upon the subject of the suture of nerves, and includes an inquiry into the immediate results of the operation and the remote and permanent success or failure. It appears that more than fifty per cent. of the cases are completely successful, and even a larger proportion than this attain a result which justifies fully the operation. The writer's investigations lead to the following brief summary of the showing made in the contributions upon the subject:

1. The prognosis of nerve-suture is very good; in physically strong persons and with regard to all precautions a good result is attainable from both primary and secondary suture, and in half of all cases the patient obtains a restoration of all function of the affected parts.

2. The result does not immediately appear, but requires a relatively long time for its complete development. The duration of the reparative process depends upon the two following factors:

(*a*) the site of the injury, and

(*b*) the constitution of the patient.

3. A successful result does not follow in wide-spread injuries of the nerves, generally in irregular process of healing of the wound and in debilitated individuals, as well as in cases of too abundant formation of cicatricial tissue at the site of the suture or around the sutured nerve.

It follows from this that suture of the nerve should be practised whenever indicated; in fact a Commission of the Belgian Association of Physicians has determined that neglect to perform this operation is to be regarded as culpable in the same sense as failure to reduce a fracture.

The Differentiation of Cystitis and Pyelitis (*Zur Unterscheidung der Cystitis und Pyelitis*).

Rosenfeld. *Centralblatt für innere Medicin, 1902, No. 8.*

This differentiation depends (1) upon the reaction of the urine, (2) the shape of the red and white blood cells, and (3) the relation of the quantity of pus to the amount of albumin.

The reaction of the urine in an uncomplicated pyelitis is acid. It may even continue acid if there is an accompanying cystitis when the cystitis is acid as by tubercular cystitis or when due to uratic stone. The shape of the white blood cells is of diagnostic importance. When they come from the bladder they are round, while the amœboid crenated shape is characteristic of the kidney. The red blood cells from the bladder with the exception of that from tumors preserve their shape and color, whereas those coming from the kidney are much changed in shape and have given up their color in part or completely.

The round epithelial cells with a transparent nucleus and about the size of a white blood cell are characeristic of the epithelia of the pelvis of the kidney. The pavement epithelia are never found and are purely traditional. The same is true of the large tesselated epithelia in cystitis. The latter have so little to do with cystitis that when many are found with a few white blood cells the diagnosis is leucorrhœa or urethritis but not cystitis.

The most important sign is the relation of the quantity of albumin to the amount of pus. In cystitis, even where there are the greatest quantities of pus introducing a sediment of several centimetres, albumen is never present in more than .1 to .15 per cent.; whereas in pyelitis there is an equal amount of albumen if the deposit is very slight. The author has divided these cases into four grades according to the quantity of pus in a litre glass. If the quantity of pus reaches to the height of an inch there is .1 per cent. albumen in cystitis and .3 per cent. in pyelitis; if it reaches about a fifth of an inch then there is .06 per cent albumen in cystitis and .2 per cent. in pyelitis; if there is a small quantity of pus then albumen is just recognized in cystitis and .1 per cent. in pyelitis; if the pus is determined only microscopically then albumen is not found in cystitis but is evident in pyelitis.

The Surgical Treatment of Diseases of the Lungs. (Ueber die chirurgische Behandlung der Lungenkrankheiten.)

H. Quincke. *Mitteilungen aus den Grenzgebieten der Medicin und Chirurgie, Bd. IX., Hft. III.*

Practically, with the exception of echinococcus disease, surgery of the lung is directed mainly to those processes associated with suppuration. The principal object in view is the drainage of the pus. The suppurative processes involving the mucosa of the bronchi are of but little surgical importance. Less frequent, but far more important surgically, are the parenchymatous suppurations as illustrated by abscess formation. The writer emphasizes the importance of aspiration of foreign bodies in the etiology of abscess of the lung and calls attention to the fact that since the era of asepsis embolic abscesses of the lung have been less frequent. The writer calls attention to the main reasons why surgery of the lung has progressed so slowly: (1) because of the tendency to the formation of multiple foci in the lung; (2) the difficulties of diagnosis of such conditions; (3) the fact that so many abscesses of the lung drain spontaneously; (4) the anatomical difficulties presented to surgery by the thorax and lung.

The writer classifies the suppurative processes in the lung into four main groups:

(1) Acute simple and acute putrid abscesses.

(2) Chronic simple abscesses and bronchiectasis and chronic putrid abscesses and bronchiectasis.

(3) Foreign body abscesses.

(4) Tuberculosis.

The writer also compares the upper and lower lobes as regards the discharge of pus from cavities, the compression of cavities during cough, and the facility with which cavities cicatrize.

His conclusions are that the discharge of pus is much easier from cavities in the upper lobe than in the lower; that the cavities ii the upper lobe are compressed less during cough than are those in the lower lobe, and that cicatrization of cavities occurs more readily in the lower than in the upper lobe.

The diagnosis of cavity is briefly discussed, reference being made to the sputum, its quality and character, and attention drawn to the characteristic three layers into which the sputum arranges itself. The importance of the presence of elastic tissue is emphasized as is the odor in certain cases.

Th value of the X-ray in determining the size and number of the cavities is also emphasized. The important question as to the existence of pleural adhesions is often difficult to state and there is no absolute rule for their determination, although they are of the greatest importance in operations upon the lung. The writer briefly discusses the prognosis of operation in each of the classifications proposed by himself. The prognosis is most favorable in the acute simple abscess, and somewhat less so in the acute putrid abscess or gangrene. Both the simple and the putrid chronic abscesses offer a much less favorable prognosis so far as definite cure is concerned, although the condition of the patient may be greatly improved. Foreign body abscesses offer a fairly favorable prognosis. Although numerous attempts have been made to treat pulmonary tuberculosis surgically, these attempts have been successful in only a comparatively few instances.

NEUROLOGY

Edited by Henry Hun, M. D.

The Action of Toxic Sera upon the Peripheral Nerves. An Experimental Study. (*Action des Serums Toxiques sur les Nerfs Peripheriques. Etude Experimentale*).

Ch. Dopter. *Archives de Médecine Expèrimentale et D'Anatomie Pathologique, Tome XIII, No. 6, 1901.*

The author begins his paper by referring to the well-known fact that peripheral neuritis similar to that associated with bacterial infections is occasionally observed as an accompaniment of auto-toxic diseases. The object of his paper is to investigate the mechanism of these forms of neuritis. His investigations were made on cases with uræmia, cases of diabetes, carcinoma, Addison's disease, and diseases associated with asystole.

He experimented upon guinea pigs, his method of procedure consisting in the injection into one sciatic nerve of from three to five drops of the blood serum of individuals suffering from the conditions enumerated. At the same time he made a control by injecting a similar dose of normal serum into the opposite sciatic nerve of the same animal. The injections were repeated from time to time, generally at intervals of two or three days. In the majority of experiments he found in the injected animals both the symptoms during life and the histological changes of peripheral neuritis. The symptoms during life consisted of pain on pressure over the nerve trunk, anasthesia and hyperasthesia, motor disturbances, sometimes complete paralysis of the affected part, and vasomotor disturbances. The degree of these symptoms varied as a rule with the degree of toxicity of the serum, the toxicity being in each case tested on other animals by intracerebral injection. An exception to this was the action of blood serum from cancerous patients, which showed very little toxicity, and which set up a neuritis just like the other sera.

The histological changes were practically identical in all cases and consisted in first of all a degeneration of the medullary sheaths of a necrotic character, which was followed by true Wallerian degeneration of the axis cylinders. The author expressed the opinion that at any rate in some of the conditions examined, it was impossible to isolate the toxic substances causing the nerve changes, and that probably no one single substance was responsible in many instances.

With regard to diabetes he was able to cause a neuritis by the injection of acetone, and suggests that this may have something to do with diabetic neuritis. It should be stated that the cases which he used for his experiments were all uncomplicated cases of the disease investigated.

As a result of his experiments he formulates the following conclusions:

1. Certain toxic sera, uræmic, diabetic, cancerous, asystolic and Addisonian, placed in direct contact with the peripheral nerves provoke alterations in their constituent fibres. These histological lesions are similar to those which are produced by bacterial toxins, segmental peri-axial necrosis followed by Wallerian degeneration. Their intensity varied with the serum employed. The majority of sera coming from several uræmics, several diabetics, etc., do not give rise to lesions of an equal degree; indeed, the serum of the same individual injected into several animals shows differences in result. The harmful action seems to depend as a rule on the toxicity of the serum used.

2. From the anology to the experimental facts we must admit that the peripheral neuritides observed clinically in conditions of general toxæmia are due to the harmful action of toxic products carried by the blood current, and constanting inpregnating the fibres of the nerve trunks. This idea, up to the present hypothetical, is confirmed and directly verified for the particular group of cases described in the article.

PSYCHIATRY

Edited by G. Alder Blumer, M. D.

Cerebral Syphilis Simulating General Paralysis. (*Syphilis cérébrale simulant une paralysie générale*).

E. BRISSAUD and ALPH. PECHIN. *Le Progrès Médical, January 18, 1902.*

The remarkable case reported in this article is that of a man, forty-three years old, who directed a large banking establishment. He was of medium stature, well formed, very intelligent and very active. He spoke, fluently, English, German, Italian, Portuguese and Arabic, as well as French. His business responsibility was enormous, but he had always endured it without faltering. His health had always been good, barring a rather severe case of clapp, contracted when eighteen years old and syphilis, which he caught in 1877; this syphilis was treated. In 1898, that is, twenty-one years after the chancre, he was attacked, for the first, by headaches, on the left side and specially located in the temporal region and the posterior region of the parietal. The morning of the 22nd of July, on opening his mail, the patient noticed that he could scarcely understand what was before him. The writing appeared blurred. Rendered anxious by his condition, he called one of the clerks to come to him, when, just at that moment, he had an attack of *scotoma scintillans,* which he described very well as broken and luminous lines; this attack was directly followed by one of Jacksonian epilepsy. For several weeks thereafter his health was good; but the headache, which had momentarily disappeared, was not long absent and was specially accentuated in the supraorbital and left temporal regions. The 18th of September, while reading the newspaper, he had a right, brachial aura; the print was blurred and then appeared the phenomenon described by the name *mirror writing;* the patient was aware that the letters and words were seen by him *inverted.* Ten minutes later he had the second epileptic attack. Then he went to Egypt for a rest. The lull did not last long, the third attack occurring on the tenth of November. This was preceded by motor aphasia. He had no sensory aphasia. For the next four months his health was satisfactory, and assiduous, intellectual work was pursued for two months. March 23rd, 1899, the motor aphasia reappeared, transitorily, and was almost immediately followed by the fourth epileptic attack. The patient soon got well of these. The first of the following June there were auditory hallucinations; he thought he heard talking and piano playing, near him. This auditory aura was followed by the fifth epileptic crisis. Thereafter the disease became more severe and good health was not resumed, after attacks, as formerly. Difficulty in speaking persisted and the sixth fit occurred the 10th of July. Then he returned to Paris. The trip lasted forty-eight hours. Soon after arrival at Paris, the 14th of July, the seventh epileptic attack occurred. That day he was examined by Messieurs Ballet and Brissaud, while still under the influence of the seizure. He had an astonished, almost hebetudinous look. The description of the patient at that time shows that he resembled a very slightly anthropoid ape. There was a strong temptation to diagnosticate general paralysis. The relatives said that matters of the greatest importance depended on the diagnosis.

The following day, when but one of the authors saw him, his condition was much better than it had been on the 14th of July. The stupidity of the previous day had disappeared. Speech was easier but still resembled that of victims of general paralysis. While his physiognomy expressed some melancholy, it was with a shade of mildness and benevolence. The headache had disappeared. The patient wanted to go back to business. That day, if judgment had been based on the *ensemble,* and not on an analysis of the symptoms, the diagnosis of general paralysis would have been confirmed. Until the 22nd of July there was no return of the Jacksonian epilepsy, but there was repeated appearances of *petit mal* and the motor aphasia persisted during that month. The 22nd of July there occurred a paresis of the right upper extremity. On his return from Egypt the patient had been treated by intra-muscular injections of biniodized oil; the fits and *malaise* ceased almost immediately, while the motor aphasia did not reappear. In short, the condition became very much better and it was at that time that appeared the ocular symptoms which enabled the authors to eliminate, once for all, the diagnosis of general paralysis. In the early part of August there arose diplopia without apparent strabismus; the latter became visible in September and two and a half months later (the 15th of October), complete paralysis of the right sixth pair was complicated by slight ptosis of the right upper lid and mydriasis on the same side. The patient was emmetropic and had an accommodative insufficiency of the right eye, amounting to three dioptries; hence, partial and incomplete paresis of the third pair. There was no abnormality of the fundus of the eye and visual acuity was normal. The right accommodative reflex was but slightly sensitive. The fourth pair was intact. The right eye winked oftener than the left. The patient presented a right, facial paresis and a complete deviation of the uvula to the left. The lower extremities were never affected. There were no psychic disturbances. The integrity of the lingual, glossopharyngeal, hypoglossal and motor branch of the trigeminus was preserved. The cause of the trouble was then evident; it was a question of the tardy effects of syphilis contracted twenty-one years earlier. In spite of the notable improvement resulting from specific treatment, the prognosis remains grave; all the more so because the history indicates the presence of a syphilitic arteritis rather than a unique and well localized gummatous lesion of the base. It is when the latter is in question that a cure may be hoped. In spite of the reserved prognosis, the authors state that the patient remained as well as he had been at any time, till November, 1901, and that he had resumed and continued business as if he had never been ill.

Infantilism. (l'Infantilisme.)

HENRY MEIGE. *Gazette des Hopitaux, No. 22, February, 1902.*

Meige gives an extensive review of this subject with very extensive bibliography. He characterizes infantilism as an abnormality of development with persistency in a subject who has reached or passed the age of puberty, of the morphological characters pertaining to infancy.

He states that the physical retardation of development is, as a rule, accompanied by a psychical retardation of development.

He divides infantilism into two distinct types, the one myxœdematous infantilism, the other infantilism of Lorain's type.

Myxœdematous infantilism was apparently first described by Brissaud in 1894. The individuals who are subjects of this form of the disease have a rounded rather chubby face, prominent lips, slightly developed nose, very smooth face, fine and clear skin, fine hair, and poorly developed eye-brows and eye-lashes. Their chest is somewhat elongated and cylindrical, and the abdomen is usually somewhat prominent. The extremities taper from the base down, and are supplied with an abundant coat of fat, which masks the prominences of the body. The genital organs are rudimentary, and there is an absence of hair from the axilla and pubes. The voice is high pitched, the larynx not prominent, and the thyroid gland is generally small. An infantile mental state always accompanies the infantile corporal state. It generally corresponds to the age period which the body growth represents. There is often great retardation, or absence of the second dentition, and in most cases there is failure of the epiphyses to unite. The head usually retains its infanitle proportions, being larger in proportion to the body than in the adult. Sometimes skin affections are present, and occasionally hysteria, epilepsy, and chorea have been observed.

Infantilism of the type of Lorain shows a different picture. The individual is small in stature, and at first sight appears to be a child. On closer examination, however, the individual is seen to have the adult build, with square shoulders, narrow pelvis, and well marked bony prominences. The muscles without being very well developed are not covered by a padding of fat as in infancy. As the author describes the condition the individual looks like "an adult seen through the wrong end of an opera glass," or as he later describes him "like a man in miniature." The development of pubic and axillary hair in this form is lacking as in the other form. The intelligence is generally fair. The epiphyses in this case are grown together.

In discussing the two forms as to their etiology and pathology the author states that the myxœdematous form is often congenital, but may be acquired. It is due to a thyroid insufficience, but just how this acts has not been satisfactorily explained. The infantilism of Lorain's type is part of a general process of defective nutrition, which may be associated with heredity syphilis, tuberculosis, alcoholism, and various forms of poisoning, as by morphine, tobacco, lead and mercury.

As far as the prognosis is concerned, that of the myxœdematous infantilism depends upon the intensity of the thyroid changes and the age at which they make their appearance. The treatment is, of course, thyroid medication, with simple diet and abstinence from alcohol and other stimulents.

The infantilism of the type of Lorain is less curable, but appears in some cases to be greatly benefited by a symptomatic treatment with the general aim of building up the health.

The author lays a good deal of stress upon the presence of lack of fusion of the epiphyses in the diagnosis of the myxœdematous form.

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INTRODUCTORY ADDRESS

Albany Medical College, Tuesday, September 23, 1902

BY JOSEPH DAVIS CRAIG, A. M., M. D.,
Professor of Anatomy

Young Gentlemen:

It has been the custom in the Albany Medical College for many years for a member of the faculty, in rotation, to deliver, on each opening day, a lecture introductory to the study of medicine. In conformity with that custom it becomes my most agreeable duty to begin the course of instruction for the year 1902-1903, with a few observations, from the student's standpoint, on some of the characteristic features associated with the study and practice of the modern science and art of medicine.

You are about to have unfolded the wondrous mechanism of the human body, transcending in the intricate arrangement and delicate adjustment of its component parts the most marvelous invention devised by human ingenuity. You will see this material machine endowed with the mystery of life and watch with amazement its vital, mechanical and chemical processes. The human machinery is set to run a traditional three score years and ten, and you will observe many times how accurate was this early observation on the limit of life. Yet you will be told that a fortunate few only round out the full period of years and be shown how the cycle is shortened by accident, by heredity, by occupation, by habit, and by specific disease. It will be to you a study of interest and profit to appreciate the efforts of the human machine to compensate, hopelessly or partially, for the derangement of its mechanical processes or to resist the invasion of the body by the parasites of specific disease. The qualities of the human mind in its natural and aberrant conditions will call for the exercise of your keenest powers of observation, but not even the intricate study of volition, the emotions and the intellect are beyond your capacity of comprehension. Taken all in all, you are to engage in the study of a matchless creation, designed, evolved and perfected in the workshop of Supreme and Incomprehensible Intelligence.

To know all you can about the natural and abnormal processes associated with this wondrous vitalized machine and to learn to apply such knowledge to the physical needs of your fellowmen, I take it for granted, is the purpose of your coming here.

You have chosen the profession of medicine as your occupation in life. You have allied yourselves with a profession not a trade. In whatever you do in preparation for your professional careers you will be wise to keep prominently in mind that you are fitting yourselves for a calling which has as its ultimate accomplishment a higher object than mere pecuniary gain; a nobler code of ethics than self-interest; a grander guiding principle than the law of supply and demand. In addition to the acquisition of the required medical knowledge, you should strive from the beginning to develop all your natural resources, in the hope that you may, in the future, become something better than medical utilitarians in the commercial sense. When you become engaged in the practice of the art of medicine, following its consideration as a science as a student in this college, it will be but a meager requital for all your weary hours of preparatory labor, if you are unable or unwilling to take a broader view of your professional obligations than the sale of your medical knowledge, like some article in trade, for what it will bring in the game of professional competition. The motive of trade and the art of medicine are often at variance. Trade is selfish, self-seeking, not given to benevolence. Your profession will demand of you the best and broadest kind of charity, often forgetfulness of self, consideration for the follies, the weakness and the vices of your fellowmen. If you are faithful in the full round of your professional work, putting behind you the wholly sordid and unworthy things, you can rest assured of winning not only a reputation as a skillful and honorable physician but also the personal and perhaps affectionate regard of a multitude of men in any community in which your lot may be cast.

There is a vast difference between the business methods of business men and the professional manners of doctors of medicine. Neither class thoroughly understands or appreciates the reason for the action of the other. While both classes are essential to the well being of the community, the standards of each are radically different and the ends to be attained as wide asunder as the poles. The one masterful purpose of trade is profit, and looks primarily towards an increase of the bank account. The final consummation of the work of the other is the diagnosis of disease and the treatment of those in physical distress. Each seeks to accommodate the public in its own way. Any one can find accommodation in trade, provided the demand is amply emphasized by collateral certificates with gold edges and wide margins and the condition is always the chance of profit. Accommodation is also freely given by the members of your chosen profession to all who require it, but the end to be attained is the relief of afflicted humanity, and the labor of giving is often without the hope of fee or reward.

These distinctions and differences in aim between these opposite, but each in its own way necessary, forces in the community have been drawn for the explicit purpose of making more obvious the fact that the doctor is not primarily a money maker. The professor of the healing art looks first and before other things to the accomplishment of his moral duties and obligations to other men and to the community in which he lives and for his living afterwards.

Were it not so the members of the medical profession would oppose every advance in public medicine, every improvement in the practice of the healing art, every discovery in the experimental laboratory, and would combine like the members of a trades union to limit the supply of apprentices and for the compulsory payment of all degrees and varieties of professional service, irrespective of the consequent hardships imposed, on the unfortunate and physically enfeebled members of the body politic. There has been a diminishing death rate throughout the civilized world during the last ten years and a consequent increase in the average of human life. Such a result is due to many causes. Among others, such a result means better care of the individual everywhere, less crowded tenements in cities, better water and milk supplies, more stringent enforcement of laws curtailing the liberty of those suffering from contagious disease and of other laws regulating the hours and conditions of labor and the age of laborers, the discovery of more specific remedies, the education of the public, by the profession, largely through the instrumentality of the technical and lay press in the avoidable causes of disease, and, in general, better hygienic conditions and more skillful treatment of disease at every point. All this means a more limited opportunity and a more restricted income to the practicing physician, and yet there has been no class in the community more zealous in contributing to produce such results than the members of your profession. The doctor has always shown himself capable of acting with the broadest public spirit and has pointed the way to accomplish results of supreme importance to the mental and physical welfare of the human race, irrespective of the consequence of such action financially to himself.

So, if any of you have entered upon the study of medicine from the purely commercial standpoint, in the hope that you may some day reap a rich harvest from the sale of medical commodities, you will do well, on the very threshold of your endeavor, to turn your backs upon a profession which, under such conditions, can only bring you bitter disappointment and vain repinings. But those of you who love science and truth for their own sakes will find no more fruitful opportunity to gratify your desire for investigation or research than in the profession of medicine which you are now seeking to enter. Granting that the purpose of your presence here is a commendable ambition to master the intricacies of medical science, you must expect, if you hope to realize your ambition, to enroll yourselves as students of medicine for life. Graduation day will not stamp upon you the mark of final acquisition of all medical knowledge but will simply represent a transition from the rudimentary study of the science under the direction of the professors of this college to the contemplation of the profounder science as applied to the alleviation of the sufferings of those incapaciated by disease from the performance of the customary responsibilities of life. Medicine is not yet a completed science, but even in so far as the mysteries of the human body in health and disease have been revealed there is opened a field for your tilling, planting and reaping, which will bring you ample remuneration, in personal gratification, if not in pecuniary return, for all the arduous and anxious labor you may have expended upon it.

But notwithstanding the fact that you are thus to prepare yourselves for the duties and responsibilities of a profession not primarily a money making one, it does not necessarily follow that you are not entitled to a living as the result of your labor, and because you are to make a living out of medicine, bye and bye, which most of you must do, you will not degrade either yourselves or your profession to the level of the market place. And because the superior talents or the uncommon advantages, resulting from a liberal education, advantageous association or natural aptitude, shall enable some of you to outstrip your fellow practitioners in honorable competition, you will not have departed from a high standard of professional ethics. It will only be when you place always self before duty, always your bank account before the physical necessities of other men, always your personal comfort and ease before the call of suffering humanity, that you will fail to maintain that degree of professional conduct which it is at once your duty and privilege to uphold in the world. These distinctions which I have drawn, between your own profession and the other occupations of life, are intended to impress your minds, at the very beginning of your medical careers, with the power and influence which you should fit yourselves to exert, each from the standpoint of his own opportunities, as professional gentleman not professional tradesmen.

Hereafter you will be expected to conform to the ethical standards set by practitioners of medicine and which constitute the unwritten law. Years of experience have taught the members of your profession the wisdom of conforming to certain limitations of conduct, in their relations with other members of the same calling, and with society at large. The term "practitioner of medicine" is intended to include all who legally and honorably practice the healing art. There is no longer such a thing as authority within a medical society to-day, either to compel acquiescence in any theory of pathological condition or therapeutic procedure or to enforce a penalty for nonconformity to ancient customs. There may still remain on the records of some medical organizations unrepealed regulations for the government of professional conduct, but professional sentiment has long since rendered such written laws ineffective and their execution impracticable. In times past such written laws have been used as a guide to professional action and their violation punished, but they have passed with the age that gave them birth, yet none of us are willing to say that they failed to serve a useful purpose in their day and generation. Unlike almost all other occupations, in which the tendency is to combination, the individual doctor is a law unto himself, and has his intelligence, experience and integrity to guide his actions, which are only limited in their exercise by the regulations of the statute law. The definition of practitioner of medicine and the powers and limitations of a doctor's art are fixed by legislative enactment. Thus regularity of practice is now fortunately formulated by law. But notwithstanding that, the individual doctor has his legal rights and privileges defined in the statute, still he is unable to make himself absolutely independent of the thoughts and wishes of other men in the same walk of life. The traditions of the fathers, public opinion, the propriety of conserving professional harmony, fix a boundary within which the individual will find it to his interest to confine his professional endeavors. So, while methods of professional procedure are no longer expressed in written codes, the profession is still under the authority of its unwritten law. "Times change and we change with them." The mutual relations of doctors to each other and the community are not the same in our times as they were a hundred years ago, nor are they to-day what they will become to-morrow. Yet the motive for the regulation of professional conduct has always been the same and has always been honorable and public spirited. The method of expression alone changes. It is a part of the unwritten law, that knowledge, acquired by reason of the confidential relations existing between the doctor and the individual or family, is never to be divulged. It is a part of the unwritten law, that the doctor is to give freely and unconditionally of his time and skill to those temporally unable to perform their usual occupation in consequence of the disabling tendency of disease. It is a part of the unwritten law, that the man of medicine be public spirited and without pecuniary reward contribute towards the education of the less fortunate members of the community in the conditions essential to avert physical deterioration and the inroads of preventable disease. It is a part of the unwritten law, that the practitioner of medicine should strive to live in harmonious relations with his professional brother. This has not always been a law with the provisions of which it has been easy to conform. Of all the unwritten laws it has been the most frequently broken. There was a time when the term "brother practitioner" was limited in its application to those who agreed with certain therapeutic procedures. The medical profession has always been a progressive one. As the spirit of the age has grown broader and wiser with advancing years, the doctor has developed at the same time a more enlightened conception of his obligations to all of his professional brethren. Neither theory nor tradition can long delay the union into one body, of all who practice rational medicine and take interest in scientific investigation for its own sake, without therapeutic conditions. To endeavor to search out the truth and give it public utterance, for the mutual benefit of all, will be the controlling motive which will bring together all practitioners of the healing art into one consistent and harmonious organization. Not theory, but the teachings of experiment and experience, are to control professional action, in the treatment of disease, from almost the beginning of the twentieth century.

The unwritten laws of medical ethics are binding on you all, and, as you prepare yourselves in the scientific requirements of medicine, remember that you must fit yourselves also to practice an art in which the purely scientific, very many times, makes concession to surrounding circumstances. To practice the art of medicine is to apply scientific knowledge under the jurisdiction of the unwritten law.

You have heard many times about a science of medicine. It may interest some of you to learn that medicine is not a complete system of facts, laws and proximate causes. Many truths concerning the normal elements of the human body and of their variation as the result of disease, are known, but more are still undiscovered. Moreover, the science of medicine is of comparatively recent date. In this characteristic medicine does not stand alone. Chemistry, botany and biology are among the kindred sciences which sprang into activity with medicine towards the close of the eighteenth century.

From the earliest dawn of history to Hippocrates, about 450 B. C., medicine consisted largely of superstitious rites practiced wholly by priests. Seven and a half centuries elapsed between Hippocrates and the Aesculapeans, and Galen, who lived about 200 A. D. Incredible as it may seem, during all these centuries, while art and literature flourished in the schools of Greece and Rome, there was not the slightest pretense among any of the scholars of that time to investigate, by experiment or observation scientifically conducted, either the normal human body or the diseases which afflict it. A dogmatic school of theorists waged war on an empirical body of men taught by experience. Neither school sought knowledge through investigation and experiment, and neither party to the controversy knew of that process of inductive reasoning which has led during the last two centuries to so many valuable discoveries. The condition during this period was but little better than that resulting from the incantations of priests. Ignorant of the most elemental principles of anatomy, a study which the superstition of that and succeeding ages rendered practically impossible, and without knowledge of which no progress in the development of the science could be made, these men could do little except trust to the recuperative powers of nature and use the most primitive methods in the treatment of disease.

From Galen in the second century of our era to Harvey in the seventeenth, was another long period of scientific inactivity. Galen was one of those men of brilliant intellect who make their influence felt in any age in which they live. He would have been a master in medicine had he lived among the workers of our day. As it was, he used the crude knowledge of his time as best he could. Galen, like those before him, was a theorist. The time was not yet ripe for scientific methods of research. Galen was also a polypharmacist, whose reputation as such has passed beyond the belief in either his theories or therapeutic measures and whose disciples are still practicing this branch of the art. It was Galen who proclaimed his belief in the truth of the humoral pathology, a theory which dominated medical thought for nearly fifteen centuries. Spirits, humors and solids made up the sum total of human existence. The perversion of these humors from their normal standard was the usual cause of disease and to restore them to their natural condition, the end to be attained by all therapeutic endeavors.

Towards the culmination of this period learning had revived and all the world emerged from the desolation of the dark ages. Harvey, as you know, discovered the circulation of the blood, and from Harvey in the seventeenth century to Virchow in the nineteenth the medical world began to prepare itself for the rapid progress then to ensue. These two hundred years became a period of adjustment. The age of theory and the inventions of the library were ended. Harvey was a contemporary of Bacon, the inventor of the inductive method as applied to scientific research and in passing of Shakespeare. New methods of investigation now began to be developed, the era of the anatomical, physiological and chemical workshop was at hand, and just here modern scientific medicine may be said to have had its birth. Harvey's exhortation to the members of his college, "to study and search out the secrets of nature by way of experimental investigation and for the honor of the profession to continue mutually in love," was the key to future medical progress. This was the age and time when the Baconian or inductive method of reasoning was proclaimed to the world. It was quickly applied to medical investigation and in medicine, as in kindred sciences, it has yielded incalculable results. Following Harvey came Pecquet, the discoverer of the lymphatic circulation, and before the close of this, the seventeenth century, the great Sydenham, who has been called the father of rational medicine, had completed his great labors. Sydenham left a deep impress on his time, but both Harvey and Sydenham had given the initiative to a procedure so radical in its methods and so revolutionary in its results that the medical world at that time refused to concede either the value of their discoveries or the results of their investigations. The full fruition of their labor became apparent only towards the latter half of the eighteenth century. During the transitional era which I am now considering came periods of activity and rest. Haller, adopting the newer methods of experimental research, made some original observations on the nerves in the eighteenth century, and through his labors gave impulse to the science of physiological chemistry. Bichat made his name universally known to science, at about the same time, as the founder of general anatomy or histology as it is now more commonly called. Towards the latter part of this same century, the eighteenth, that great patient investigator and experimentalist, John Hunter, the founder of the greatest museum of comparative anatomy and pathology of his age, gave a stimulus to medical science which will be remembered, to his glory, as long as the history of medicine endures. Like Harvey and Sydenham before him, Hunter was a tireless experimental laboratory worker. He knew no authority of opinion or theory. He was content only when he had proved a fact. At a time when there was little surgery but the barber shop, Hunter, while not the most distinguished operating surgeon of his time, still brought his great powers of scientific observation to bear upon many of the then unsolved problems of surgical pathology and left a name as a discoverer in no sense equaled by any of his contemporaries. Scientific workers now began to multiply with great rapidity, and important discoveries to swiftly follow each other.

When Virchow announced his doctrine of cellular pathology he revolutionized medicine, and from his time scientific medicine has shown unlimited progress.

While scientific medicine is of comparatively recent date and not yet completed, though progressing with great speed, that which is taught in this college must be scientific only to the limit of human knowledge. That which is not yet known must be still explained empirically, and while waiting, in the hope of receiving greater light, the doctor must do that which seems expedient for a time. Therefore, be not intolerant in your expression of scientific opinion either now or after graduation, for a medical gentleman shows best his appreciation of the difficulties which beset him in the application of medical knowledge to the practical affairs of life, by a spirit of charitable leniency, towards the conjectures of others which may eventually prove to be the truth.

It might seem from this cursory review of the great epochs in medicine that the professors of the healing art had been unenterprising and unprogressive until comparatively recent times. But the awakening in the seventeenth century and rapid progress in the eighteenth was not of medicine alone, but applied generally to every branch of systematized knowledge. It was the beginning of the eighteenth century when Linnaeus made his natural classification of plants, and near its close when Priestly (1774) discovered oxygen and Lavoisier, who lost his life in the French revolution, enunciated his discovery of the source of animal heat.

The sciences, particularly those dealing with natural phennomena, have developed together, and the progress of one is dependent to a degree upon the discoveries in the other. This principle of dependence in its application to medical progress can be exemplified in many ways. The stethoscope did not become an available instrument for the diagnosis of disease until after the discovery of the laws of sound. The profession had to wait for Henry to wind his armature and search out the laws of electrical induction, before the rapid and universal diffusion of medical knowledge through the instrumentality of the electrical telegraph became a possibility. The Leyden jar preceded the Roentgen ray. The discovery of the art of printing came of necessity before the rapid and economical multiplication of scientific books made their general possession practicable. The power of steam had to be demonstrated and became a commercial certainty before the newspaper and periodical brought their enlightening presence into every quarter of the globe. With the newspaper came the more liberal education of the public, which eventually permitted legislative enactments which rendered possible the scientific dissection of the human body, as well as regulated necessary physiological experimentation. From both the legal dissection of the human body, and the permissible experimentation on the living lower animal, results have followed of inestimable benefit to the race. Personal contact, except within very narrow limits, for the comparison of experience through the instrumentality of national medical societies could not become general until the railway had furnished facilities for rapid transit. The aniline colors were revealed by the experimental chemist before the differential staining of tissue brought to light innumerable varieties of bacteria. Physics and the mechanical arts developed the high power immersion lens before the microscope revealed its marvelous wonders. Pasteur came of necessity before Koch and Lister and the bacteriologist before the modern practice of medicine and surgery.

The consideration of the development of the medical school as a center for professional training, and particularly of the Albany Medical College, in its relations to the progress of medical science, would present an interesting theme but would carry us far beyond the limits set for this address. A few facts, however, concerning the history of medical education may be to your interest and profit. In the beginning, the anxious enquirer for medical knowledge picked up what information he could from his association with a preceptor, with whom he had registered and from whom he received occasional instruction and advice, reading at odd moments, the few works on medicine that were available in his teacher's scant library. If residing in the larger centers of population, the old time medical student attended, if he pleased and as he pleased, the independent lectures of some distinguished leaders in medicine. These lectures were delivered in series, in some hall or hospital, and were largely didactic in their nature. They were open to all comers who were able to pay the required fee, and the fitness of the applicant was not a matter for serious consideration. There were no tests of knowledge, no recitations, no quizzes, no examinations. When a student thought he knew enough he practiced the art, as then known, on such members of the community as were willing to offer themselves a living sacrifice on the altar of empiricism.

About the middle of the eighteenth century, Dr. Bromfield, at St. George's Hospital, London, gave one of these private courses of lectures on the subjects of anatomy and surgery. Thirty-six lectures sufficed to present these entire subjects. In contrast to the then small number of lectures, upon these important branches of medical science, it is worth considering that in this college the coming winter nearly two hundred lectures will scarcely be sufficient to cover the subject of anatomy, while twice that number of hours additional will be devoted to practical work in that subject. Surgery will require also as much time for its due consideration. In other words, about twelve hundred hours' compulsory attendance will be required to consider subjects which a century and a half ago were finished, if a student willed to do so, in thirty-six. Dr Nicholl, at about the same time, presented the whole subjects of anatomy, physiology, pathology and medicine in the same number of lectures. At St. Bartholomew's Hospital, London, in the year 1748, Dr. Nourse gave all that was then known of anatomy in twenty-three lectures. A little later than this, these independent lecturers began to group themselves for the purpose of giving systematized instruction in the science and art of medicine, and towards the close of the seventeenth century the first English speaking medical school can be said to have been founded.

The Albany Medical College was founded in the year 1839. Dr. March, Dr. Armsby and the other members of the first faculty were leaders in all that pertained to the science and art of medicine in that day. Almost immediately after its foundation the college became a teaching center, and its fame became widespread. The sixty-three years since the beginning of the college, have witnessed marvelous discoveries in anatomy, physiology, pathology and, in fact, every one of its departments. The course of instruction has been amplified and varied, and the corps of instructors increased time and time again, to keep pace with the rapid progression made in all branches of medicine. It has always been the pride of the college to keep abreast of the times. To-day, more than ever, it merits the confidence which the profession has always had in its ability to offer competent and reliable instruction in the modern science of the healing art. Beginning with this year, the course of instruction has been still further extended until its didactic and clinical instruction is believed to represent all that is progressive and judicious in the teaching of medical science and art.

You have chosen this college as your alma mater, and it is to be hoped that the consummation of your primary medical course may prove the wisdom of your choice. Yet a medical college never made a skilled and successful practitioner of medicine. A medical college can, at best, offer the opportunity of learning, and this opportunity the student must himself seize and improve. This college will offer you every advantage for the pursuit of medical knowledge and will, perhaps, give more than even the brightest of her students can completely digest and assimilate. If a student fails of success, such failure will not be due to either the instruction or instructors, but the cause will lie behind these in his own neglect or incapacity.

The minimum of required education, preliminary to the study of medicine, you all have. But some of you have been fortunate enough or wise enough to have acquired in some preparatory school or college, a larger store of knowledge, a more thorough mental training and a more skillful method of study than the entrance examination demands, and will not regret the additional time spent in the cultivation of your mental faculties. The world demands, more and more, the better education of her medical men, and any practitioner of medicine enters the field of professional labor with the greater assurance of success if his medical knowledge rests on the rock of broad and thorough preliminary training.

It is unnecessary to say very much concerning the course of medical study adopted by this college. It is taken for granted that each medical student proposes to work industriously to fit himself for the highest place in society, after graduation, that his individual talents and opportunities will open for him. With such an end in view, the student accepts the curriculum as laid out for him. Yet it may not be amiss to say that under-graduate study naturally divides itself into those primary branches which have to do with the facts and hypotheses of medicine and those other departments which concern the doctor more particularly in the practical affairs of life. Each of these classes has a proper place in the scheme of medical education. Neither must be sacrificed at the expense of the other. Each must be considered in its proper relation of time. Of the two, in the development of the student's mind, the primary subjects are the more important, for the reason that after graduation day the practical application of the art of medicine must be cultivated assiduously, as the doctor's living will depend upon his ability to apply his knowledge of facts, while the stimulus which urges a student to accumulate the hard dry details of anatomy, chemistry and materia medica, is largely withdrawn when the last word of the final examination paper has been written. The strength and stability of the superstructure of a building depends in large measure upon the thoroughness and substantiability with which the foundation has been laid. The larger and more elaborate the building the more secure must the foundation be. You can remodel parts of the superstructure and change its ornamentation, as you will, but a foundation is placed in position once for all. To labor assiduously in acquiring a thorough knowledge of the underlying principles of medicine is to act the part of wisdom.

There is no short cut to medical knowledge. Hard work alone leads to an understanding of the principles of the healing art. Regular hours and regular hours of work are conducive to progress, and ultimate success, as student and doctor, often depends upon a willingness on the part of the individual to keep both. In any occupation, all work and no play makes a dull boy, and relaxation and recreation are necessary, under physiological law, to keep a sound mind in a sound body. But relaxation must never be allowed to grow into laziness or license, nor recreation degenerate into dissipation and vice. Any man works to the best advantage and endures longest who regulates his hours of labor by the working factor of his personal equation. In each individual this equation is dissimilar and personal. To maintain the highest physiological activity in all the functions of organic life, a man can work just so many hours a day and no more, must spend just such a proportion of the daily cycle in refreshment and sleep, and must have also a portion for exercise and recreation. The relative proportion of hours assigned for each of the activities of life forms the personal equation and differs in each individual and in the same person at different times. When a student has found the working factor of his own equation his capacity for sustained labor must be limited by it. To habitually trespass beyond the boundary of his mental powers of endurance is to court eventual physical disaster. It usually happens, perhaps, fortunately, that few approach the danger line.

It may stimulate some of you to more persistent and intelligent endeavor during these undergraduate days, if the evidence is at hand to prove that a practitioner's success in medicine will depend upon his own exertions, and not upon the fact that he has had legally the degree of M. D. conferred upon him. The profession of medicine is both an honorable and learned one. The converse of this proposition is not necessarily true, that all followers of the healing art are either honorable or learned. Unfortunately the day of the medicine man is not yet passed. As the educational requirements demanded by law and the severity of final examinations increase, as the credulity of ignorance and superstition in the efficacy of patented formulæ and advertised nostrums, fades before an enlightened public sentiment, the day of the charlatan will have ended. That day has not yet dawned. Up to the present time the title M. D. has been bestowed upon all sorts and conditions of men, irrespective of their capability to intelligently practice the art of medicine or their tendency to disregard moral obligation. The learned and eminent leader in medicine, of lofty principle, who does his best alms in secret, and gives to rich and poor alike the benefit of his ripened experience, and the fellow on the band wagon, pulling teeth for nothing and incidentally selling to a confiding public his secret wares, have each alike been able to place the letters M. D. after their names. There has thus arisen in the popular mind a contempt for the degree M. D., and to-day the title is merely synonymous with a license to practice medicine. Its possession brings neither social position, lucrative practice nor unusual privilege. The doctor stands as an individual before the community and he succeeds, if he succeeds at all, because he has by his perseverance, skill and integrity proven himself worthy of confidence and respect. Whatever place the professional man takes in society must be won by his own laudable endeavor. Membership in an honorable and learned society, influential friends and independent means may assist materially in the attainment of an eminent position in public and professional regard, but these advantages are not sufficient in themselves. The man must show his ability to overcome many obstacles, rise above many disappointments and win his own way by industry, intelligence and moral worth.

After graduation the student stands face to face with the conditions limiting his opportunity to conquer the world. He must not expect to have other than the common fate of men, and whatever sacrifice of pecuniary interest or personal comfort the demands of professional service may require, he must not expect either consideration or privilege therefore, but must live in an utilitarian world and be judged by the same standards as other men. He will be required to pay his bills promptly, at the end of thirty days, and to wait indefinitely or infinitely the payment of his own. As a distinguished professor of this college once said, in one of these introductory lectures, "an attending physician will sometimes receive great credit for the successful termination of a case when it is least deserved and at other times be compelled to submit to severe and unjust criticism for a fatal issue after the performance of the most skillful and unselfish service." To be criticised, however, is sometimes the sincerest flattery. The cynical, the pessimist and the unsuccessful will alike see nothing in another life to praise. So—

"When they hammer at your name,
Then you know you're in the game,
'Tis a species of acclaim,
Never mind the knockers."

The path to eminence in medicine, as in every other life work, is strewn with difficulties and sometimes hardships. Reputation and fame are dearly won in the face of many contentions.

"He who ascends to mountain tops shall find,
  Their loftiest peaks most wrapped in clouds and snow.
He who surpasses and subdues mankind,
  Must look down on the hate of those below.
Tho' far above the sun of glory glow,
  And far beneath the earth and ocean spread,
Round him are icy rocks and loudly blow
  Contending tempests on his naked head."

The trumpets blare announces the passing spectacle. The crowd acclaims its hero for the hour. The brutal, merciless law of supply and demand directs the social order, in obedience to which come the abundant rewards of life. The world's heart is cruel and unjust. Human society is intolerant and knows only commercial law. Neglect is often the penalty for conscientious labor. Silence many times constitutes the only reward for duty done. But the tinsel of the spectacle quickly fades, the popular hero of to-day is forgotten in the idol of to-morrow and all human ills have their compensation through the agency of the higher law. The preliminary steps in an efficient training for a professional life are indeed arduous. The possibility of an abundant competency is hopeless, except to a few, the duties of a busy practitioner are at times laborious to perform, and the necessity for assiduous watchfulness in the acquisition of a knowledge of new discoveries imperative. Judging by appearance, whatever the estimation of the world may be as to a doctor's capability and intent, this does not furnish his only consolation. The doctor who rises to a full appreciation of the dignity and influence of his art, has abundant compensation for all his toilsome labor in the consciousness of a power maturing within him, as the years go by, to look with consideration and sympathy upon the physical and moral misfortunes of others, to act with generous impulse in the alleviation of suffering and to pursue an unvarying course of honorable conduct, regardless alike of the adulation of grateful patients or the detractions of the unappreciative. To keep secret the infirmities of unfortunates, to relieve physical distress without pecuniary condition, to strive to hold an honorable place among honorable men, to learn to suffer in silence the unjust criticism of ignorance and envy and malice, to shun the plaudits of the crowd and to be industrious in the acquisition of medical knowledge, are factors in the development of an ennobling character in medical men. Not all members of the medical profession are able or willing to qualify themselves for the highest professional service by the cultivation of the nobler qualities of the healing art, but those who do are gratified to win eventually the wingless victory.

Young gentlemen, an honorable calling will welcome you after graduation day. It is your duty to fit yourselves to take a creditable place among the members of your chosen profession, not only by the development of your intellectual faculties, but also by the cultivation of moral and social grace.

I trust this address may be something of an inspiration to help you to a higher conception of your duties and responsibilities. What are the ideals towards which you strive?

Is it to raise the sick and maimed to health,
Content to prosper, yet disdaining wealth?
Is it with gentle touch and cheerful face,
To bring sweet comfort to a hopeless case?
Is it to cultivate the art to heal
Your patient's ailments and his faults conceal?
Is it to aid the triumph of the true,
Give right full measure and the wrong its due?
Is it when treason menaces the State,
Her cause to aid; her enemies to hate?
"Is it with hands untried in Fagan's school,
To live and let live by the golden rule?
Is it beside old Plymouth rock to stand,
And give the freedom which yourselves demand?
Is it to be a true, unselfish friend,
Prompt to rebuke, yet valiant to defend?
Then may God's grace your battle gear supply,
And crown your souls with wingless victory."

THE INFLUENCE OF THE DISCOVERY OF THE RELATION OF BACTERIA TO DISEASE ON THE PRACTICE OF MEDICINE EXCLUSIVE OF SURGERY.

AWARDED THE SCHUYLER ALUMNI PRIZE FOR 1901.

BY H. JUDSON LIPES, M. D.,

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Antitoxin of Diphtheria.—No more wonderful discovery in the realms of medicine was made in the nineteenth century than that of the antitoxin of diphtheria. The results that have thus far been obtained in the treatment of this dreaded disease with the antitoxin have been exceedingly favorable. The mortality from diphtheria has been reduced about half under the influence of this therapeutic measure. Reliable statistics show that in the cases submitted to treatment with antitoxin the disease pursued, in general, a milder and more favorable course. In cases seen, after the disease had progressed several days, existing manifestations of stenosis improved in a large number of cases, so that tracheotomy or intubation was avoided. Serious sequelæ with certainty attributable to the antitoxin have thus far not been observed.

The good effects of the antitoxin are experienced, no matter whether the diphtheria membrane exists in the nose, pharynx, vagina or uterus (Croffi), or in any other locality.

Personal prophylaxis by means of injections of antitoxin is being employed more frequently, but not so much as it should be done. The main objection that has hitherto stood in the way of its more frequent use was the fear of disagreeable complications due to the serum. With the present highly concentrated antitoxin, however, there need be no fear. The writer has used even as high as two thousand units as a prophylactic measure without any ill effects whatever.

By means of the modern prophylactic and curative treatment, diphtheria (now one of the more common of infectious diseases) will, in the not distant future, become one of the rare diseases.

Diphtheria Antitoxin Used in Other Diseases.—Not only has anti-diphtheria serum been used for specific treatment, but it has been used for example in the treatment of asthma.

Revillrod uses this serum in the treatment of asthma for the reason that it assisted in the elimination of the particular noxious substance which is expelled through the respiratory tract. The success which he obtained leads him to believe that this method of treatment is worthy of consideration and farther study of the profession. It is also claimed that diphtheria antitoxin has been used with great success (Journal de Médicine de Paris, March 4, 1900) in the treatment of whooping-cough. It is claimed to decrese the severity of the disease and to reduce the frequency and violence of the paroxysms.

Inoculation for Rabies.—Although the specific infectious agent in rabies has not been demonstrated, and although the inoculations made in persons bitten by rabid animals to prevent the development of this disease, do not involve the use of bacteriological methods, the discovery of the prophylactic value of these inoculations is a result of preceding bacteriological researches. The great utility of the method of vaccination against rabies is no longer seriously doubted by any one. For example, in the year 1891, three hundred and ninety-four persons were treated in the Pasteur Institute, the diagnosis of rabies in the biting animals being established with all possible certainty, and not a single patient developed the disease.

Tetanus Serum. — It is obvious that the outlook for serum-therapy in the case of tetanus in human beings is from the outset less promising than it is in that of diphtheria. As it can not be determined from inspection that a wound is infected with tetanus-bacilli, the disease comes under medical observation only after the toxin has already invaded the central nervous system, and has induced more or less extensive and in part, perhaps, irreparable injury. In fact, as Lambert and others have shown, there are no tetanus bacilli alive in the wound at the time of the development of the symptoms of the disease in cases of tetanus. For this reason the cases of tetanus thus far treated with serum have not, on the whole, yielded good results, but as the antitoxin becomes more concentrated and larger doses used, the results will be greater. Lately numerous successful cases have been reported.

Antispirillum Serum.—Among the list of sera that used in the treatment of relapsing fever probably stands next to diphtheretic serum in value. As has been pointed out under "diagnosis," it is of immense value in determining the presence of this disease, and, if so determined, a further attack is prevented by using the specific antispirillum serum.

Treatment of Bubonic Plague. — In the treatment of bubonic plague prophylaxis consisting in disinfection, hygienic precautions and isolation are of utmost importance.

The successful immunizing of animals against the bacillus of bubonic plague—which, under the name of Black Death, once decimated the populations of the earth—so that the serum afforded protection, from injections of virulent cultures, was done by Yersin, Calmette and Borrel. Yersin has applied this serum to the treatment of bubonic plague in man and with very promising results. As in diphtheria, experience has shown that the treatment is more efficacious the earlier the stage of disease. Haffkine, in India, has recently applied his method of preventive inoculation to the bubonic plague, as he previously did with cholera, and apparently with equally good results.

In this country, investigation and experimentation with this serum, carried in at the New York Quarantine Laboratory, Staten Island, by Fitzpatrick, indicate that this serum is able to both prevent and cure bubonic plague.

Asiatic Cholera.—As in bubonic plague, prophylactic measures are of greatest importance in preventing the spread of Asiatic cholera. Since we have learned the natural habitat of the spirillum of cholera, we know that the fresh stools of the patient suffering with this disease particularly, in the early part of the attack, give rise to the dissemination of cholera. So that the proper disinfection of the alvine discharges is of the utmost importance.

That the anticholera serum is efficient as a protective is no longer doubted since Haffkine, in India, has succeeded in producing an artificial immunity against cholera infection by means of subcutaneous injections of cholera cultures in thousands of natives. The question as to the value of this serum in the treatment of patients already infected is still sub-judice, but since the protective immunization has been so successful, we may hope for equally as good results when the serum is sufficiently potent.

Treatment of Tuberculosis.—But there is no subject of so much interest to the whole world as the prophylactic and curative treatment of tuberculosis. As we have already seen, immense good has resulted already in the scientific application of hygienic measures in the prevention and cure of this dreadful disease, and, from the results thus far obtained, we are convinced that the ravages of this disease can be stopped so soon as every one has learned and adopts these precautions.

But while we are gratified at the results already obtained by prophylactic measures, we are searching after a specific remedy. Many efforts have been made to confer immunity to tuberculosis, and to effect the cure of tuberculosis by the same means, but without practical results. R. Koch endeavored to secure a direct and specific influence upon the tuberculous lesions by means of tuberculin. Koch's discovery of tuberculin must rank as one of the first importance in scientific medicine, on account of what it has led up to , even if—as appears probable—the final verdict may be that its therapeutic value is very slight. Diagnostically, as we have seen, tuberculin has proved an exceedingly useful reagent, but the therapeutic employment of this toxin (not an antitoxin) has not yet yielded satisfactory results.

Lupus.—Lupus is at times favorably influenced by tuberculin, but no case is yet known in which recurrence has not taken place. Ulcers of the larynx clear in a most remarkable manner after injections of tuberculin, and undergo healing; but in those cases also recurrence generally takes place. While tuberculous disease of bones and joints is not at all influenced by this treatment, intestinal and peritoneal tuberculosis appears to pursue a relatively favorable course.

The original tuberculin in the treatment of pulmonary tuberculosis has been almost entirely abandoned by physicians. Koch, after the failure of the original tuberculin, applied himself unremittingly to the improvement of tuberculin-preparations. According to Koch, tuberculin R exhibits distinct immunizing properties and gives rise to reaction in tuberculous subjects only when used in large doses. He recommends that this new remedy be employed only in recent, pure cases of tuberculosis uncomplicated by mixed infection. The clinical reports that have thus far been made with regard to the treatment of tuberculosis with T R show the freedom from danger that attends the use of the remedy, but little as to its therapeutic utility. Behring is of the opinion that tuberculin R is less well adapted for therapeutic employment in the case of human beings than for the fundamental inoculations of animals for the purpose of further immunization.

From the experiments conducted in the Bio-chemical Laboratory of the Department of Agriculture at Washington, De Schweinitz concludes that while the injections with tuberculin produce a serum containing antitoxic materia, the amount of this is small, and that the injection of the live culture is as yet the proper treatment.

The treatment of pulmonary tuberculosis by serotherapy is best summed up by Maragliano, who claims that the employment of serum in the tuberculous human subject is justified from a scientific point of view: (a) By the action of the serum against tuberculous poison; (b) by the analogy of the therapeutic process of the serum with the defensive processes of the organism in spontaneous cure. From a clinical point of view, the action of the serum is demonstrated in man: (a) By the fall of temperature; (b) by the disappearance of bacilli from the sputum; and (c) by the cure of broncho-pneumonic foci. The examination of one thousand three hundred and sixty-two clinical observations justifies the application of the serum to the therapeutics of human tuberculosis.

Thus we see that the results already obtained are significant and give promise of the cure of this widespread disease in the future.

Of the other sera, we might classify the antityphoid and antidysenteric sera as of doubtful utility.

Serum for Typhoid.—Specific immunization against experimental typhoid infection has been produced in certain animals by injections of living or dead typhoid cultures. The blood-serum of living or dead typhoid cultures. The blood-serum of animals thus immunized has been found to acquire protective and curative bactericidal and, perhaps, feeble antitoxic properties against the typhoid bacillus.

No marked results have been obtained as yet from the employment of typhoid-serum for the cure of typhoid fever in man.

Wright, in England, has tried inoculating certain British troops against this dread enemy of the soldier on foreign service with evident success. For example, out of two hundred attendants, at the Maidstone Asylum in Kent, ninety-five persons were inoculated and none contracted fever, while of those who refused to undergo the process, nineteen suffered from the disease.

Of the cases treated by injections of the sera, it is a question of doubt whether other media, *e. g.*, normal salt solutions, would not have been equally efficient. But the fact that this sera seems to afford protection from typhoid fever, and aids us in the diagnosis of this disease, leads us to believe that the time is not far distant when its antitoxic properties shall be discovered and prove of value.

Antidysenteric Serum. — Antidysenteric serum, mentioned above, has not received the study nor been applied as diligently as the antityphoid serum. The discussion of this subject may be dismissed by the statment that its value has been ascertained, in about the same degree as that of antityphoid serum.

Numerous investigators have produced and experimented with other sera which, however, are practically inert. This list would include antistreptococcus, antipneumococcus, antiamarillic sera and others. Antistreptococcus serum has been used in various conditions with more or less practical results. While Marmorek claimed beneficial results from the employment of his serum in the treatment of erysipelas and other streptococcus diseases, Petruschky, who repeated Marmorek's experiments, was unable to confirm his conclusions. To estimate the exact present value of antistreptoccus serum is a matter of the utmost difficulty inasmuch as the reports are so conflicting. Many of the cases reported are valueless, because cultures were not made, and consequently we are in doubt as to the nature of the bacterial infection. Scarlet fever, erysipelas, epidemic cerebro-spinal meningitis, puerperal fever, tonsilitis and post-operative septicæmia have been treated with this serum. Marmorek claims to have seen marked improvement in phthisis when complicated by streptococci. The results obtained in this country have not been very encouraging.

Weir concludes that the antistreptococcic serum of Marmorek has some good effect in erysipelas, and probably in scarlatina; that it is yet to be proved as valuable in puerperal septicæmia, the present testimony leaning against its efficacy in such infections; that it is worthy of a further test in cellulitis, osteomyelitis and surgical peritonitis.

Malignant Tumors. — The treatment of inoperable cases of malignant disease by the injection of the toxin of erysipelas appears to have a distinct though very limited field of usefulness. (Fowler.)

Chancroid.—Moore claims that this serum proves a good prophylactic measure and assists in healing chancroid, and causes resolution in the majority of cases of inflammatory bubo.

In Smallpox. — Lindsay believes that the death of smallpox patients, which so often occurs about five days after the pustules have dried and have begun to be absorbed, is caused largely by reinforcement of the specific virus of variola with pyogenic toxins. He has, therefore, used antistreptococcus serum, just before or coincident with pustulation, with excellent results.

The experiments of Huber and Blumenthal with the blood of persons convalescent from scarlet fever, measles, pneumonia and erysipelas, in the treatment of these diseases, while in another direction gave promising results.

Curative experiments in man have also recently been made with the blood-serum of immunized animals, and of persons who have recovered from an attack of pneumonia. F. & G. Klempens have conducted some very successful experiments in this line.

Antipneumococcus Serum.—It is probable that the antipneumococcus serum may be able to prevent a general infection from taking place from the diseased lung, even though it may fail to influence the local process. Injections of that serum seem to be practically harmless. The number of cases reported, however, in which the blood-serum of animals artificially immunized against pneumonia infection has been used for the treatment of the disease, although considerable, is still too few to warrant the expression of any definite opinion as to the final value of this as a therapeutic agent.

We can not yet accept the reports of cases of yellow fever successfully treated by the antimarillic serum, since the etiological factor of that disease has not been fully established.

Antivenomous Serum.—Calmette, in a paper read before the International Congress of Hygiene, at Madrid, discussed the subject of antivenomous serum. The serum which he discovered and prepared, according to his claims, antagonizes the action of all venomous poisons. He says that the reason why certain others have not secured results as good as his is that they have not taken into full account the difference in weight between the animals experimented upon, and have, therefore, not used the serum in doses proportionate to the weight and resisting power of the animals employed.

The greatest obstacle in the way of immunization against serpent poisons is the fact that people liable to this active contagion are situated too distant for its application. Several members of the party sent by the French government on an expedition, in charge of M. Raoul, to make researches in Malaita in regard to indigenous plants, were bitten by snakes while making their investigations, and they declare that their lives were saved by injections of Dr. Calmette's serum, of which they carried a liberal supply.

Thus we have seen the marked benefits every department of the practice of medicine has derived from the discovery of the relation of bacteria to disease.

In summing up his excellent review of the "Progress of Medicine in the Nineteenth Century," Dr. John Billings remarks: "All told, the most important feature in the progress of medicine during the century has been the discovery of new methods of scientific investigation, particularly in the field of bacteriology.

These methods have been as yet only partially applied, and great results are to be hoped from their extension in the near future. They will not lead to the discovery of an elixir of life, and the increasing feebleness of old age will continue to be the certain result of living a long time, for the tissues and organs of each man have a definitely limited term of duration peculiar to himself; but many of the disorders which make life a burden in advancing years can now be palliated or so dealt with as to secure comparative comfort to the patient, so that 'if by reason of strength' life can be prolonged beyond threescore years and ten, it no longer necessarily involves labor and sorrow."

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THE TECHNIQUE OF BLOOD EXAMINATION.

Bender Laboratory, Albany, N. Y.,
October 20, 1902.

To the Albany Medical Annals:

For illustration of my Scientific Review on this subject, published in the October Annals, I intended to make use of plates forwarded by Dr. Herbert C. Emerson from his clinical laboratory at Springfield, Mass., which arrived too late for insertion. Dr. Emerson issues very explicit directions for the preparation of specimens of blood, which I think are worth republication in connection with the description given in the October Annals, and are appended.

Yours very truly,
Arthur T. Laird.

EXAMINATION OF BLOOD.

Valuable information may be gained from the study of a (stained) thin film of blood spread upon a glass slide.

Briefly, the following facts may be determined:

Presence of malarial or other organisms;

Approximate estimations of the amount of hæmoglobin and the ratio of red and white cells;

Presence of abnormal forms of red and white cells;

Differential count of white cells.

The following procedure should be carefully followed in preparing the specimen:

DIRECTIONS FOR PREPARING SPECIMENS OF BLOOD.

1. Cleanse the skin of the lobe of the ear with soap and water. Dry.
2. Prick the lobe deeply to insure free escape of blood.

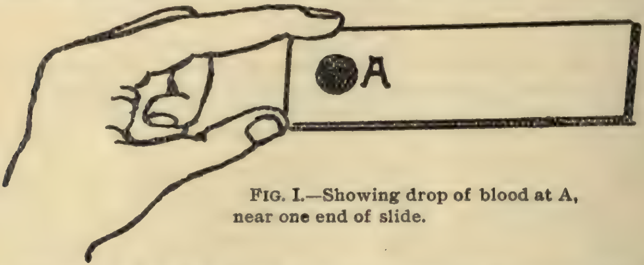

Fig. I.—Showing drop of blood at A, near one end of slide.

3. Avoiding the first few drops, touch the escaping blood with the surface of one of the slides about one-half inch from the end, to secure a drop of blood, as A in Fig. I.

4. Place the slide on some firm object, as table or book.

5. Take the second slide by the edges between thumb and fingers, allowing the other end to rest just ahead of the drop of blood on the first slide used. Fig. II.

6. Holding the slide as indicated in Fig. II, at about an angle of 45°, draw it slowly but with firm and even pressure down the length of the slide, thus distributing the blood in a thin layer over the surface.

7. Repeat this procedure, using the slide first smeared with blood as the "spreader."

8. Allow the slides to dry in the air, and replace in box, face up, according to directions on cover.

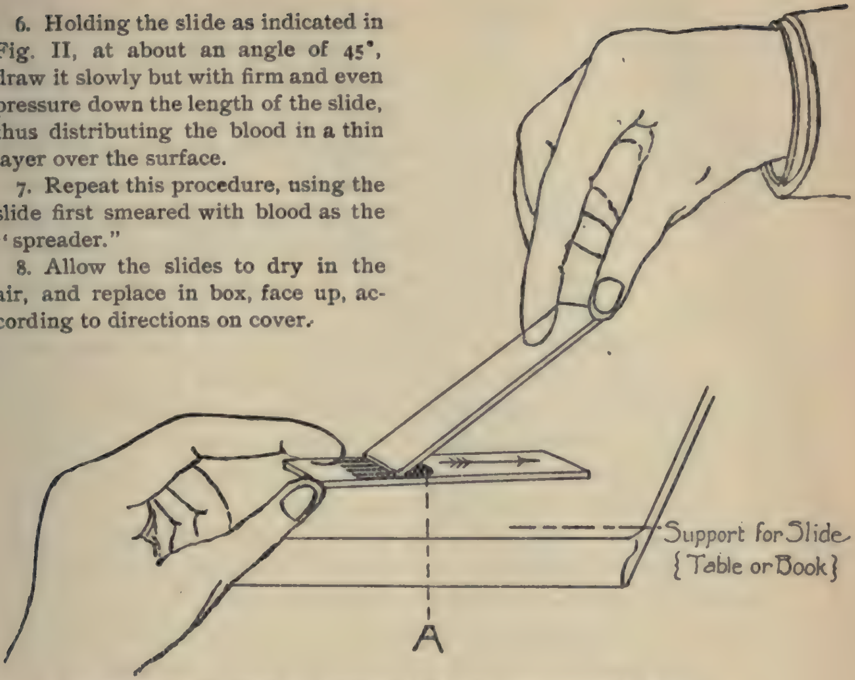

FIG II.—Showing method of spreading the blood over surface of slide.

9. Seal both ends of box securely with gummed labels, and place outfit in addressed envelope for return to laboratory.

Name of patient and physician's name and address should accompany each specimen.

Editorial

> The doctor told Nan many curious things as they drove together; certain traits of families, and how the Dyers were of strong constitution and lived to great age in spite of severe illness and accidents; while the Dunnells, who looked a great deal stronger, were sensitive and deficient in vitality so that an apparently slight attack of disease quickly proved fatal. Some were safe to form a league with against any ailment, being responsive to medicines and straightforward in their departure from and return to health; others treacherous and hard to control.
>
> SARAH ORNE JEWETT.
>
> *A Country Doctor.*

The Question of Antivivisection

The pseudo-humanitarians who go under the name of antivivisectionists, but who could with propriety be called antiscientists, have recently sent out a fresh sample illustrative of their literary powers. In the pamphlets which they have recently issued, they again invoke the shades of the departed Lawson

Tart and Jacob Bigelow to testify as to the cruelties which are perpetrated in the name of science. In their reference to Bigelow a trick which is characteristic of these misguided enthusiasts appears. They refer to a book of Bigelow's in one of their pamphlets as being published in 1900. This gives the impression that his antagonism to vivisection is of recent origin. As a matter of fact Bigelow has been dead for a good many years, and this book is merely a reprint of some of his old writings which have recently been brought together.

We take it that these pamphlets indicate a fresh campaign in Washington this winter, and presume that the antivivisectionists will once more bring in the highly objectionable bill known as "Senate Bill No. 34," which they have attempted to push through Congress for the last two or three years. We think this a timely opportunity to once more call the attention of the profession to the fact that this bill though purporting to simply regulate vivisection puts such restrictions upon it that were the bill to pass animal experimentation must practically cease. The bill is furthermore merely an entering wedge, and, it is evidently the object of the individuals who are behind it to endeavor to use it after it has been passed in Washington as a sort of a model bill on which to found similar antivivisection laws for other states.

For those who require further information concerning the flagrant absurdities and errors of this document, we would refer to the recent publications from the Government Printing Office of the hearing before the Senate Committee concerning it. We would merely emphasize at this time the necessity of the opposition of a united profession in this matter.

A Classic Revived

The Albany Medical College has been fortunate in the local alumni associations, which have grown into active existence during the last few years, and have kept alive the interest of graduates in different communities, who would otherwise remain in ignorance of the presence of the colleagues and of the friendship arising from meeting upon a common basis of education and experience. One function of these gatherings has been of the character of reminiscence, which bears a large part of their proceedings, and prominent in reminiscence has been the recital of the personalities and peculiarities of the faculty. The pioneers of the College Faculty were men of striking individuality and strong character, and their impress has been lasting. Alumni do not need reminders of Professors March and Armsby, whose energy gave permanent impetus to the school, but stories of these founders are always relished, as if new. At the second annual meeting of the Central New York Alumni Association, it fell upon Dr. M. B. Fairchild, of the class of 1868, to recount the skill and ability of the faculty of his day. Among other interesting descriptions he gave Professor Armsby's favorite poem, "To a Skeleton," which the Professor is known to have recited with a great deal of feeling and appreciation. This poem is widely printed and known, but possesses lasting beauties, which justify its reproduction here. It has a curious history. Nearly one hundred years ago it was first printed, and excited much attention. It was said to have been found in the museum of the Royal College of Surgeons, Lincoln's Inn, London, near a perfect human skeleton. Every effort was made to discover the author, even to the offer of a reward of fifty guineas, but the poet still remains anonymous.

LINES TO A SKELETON

Behold this ruin! 'T was a skull,
Once of ethereal spirit full;
This narrow cell was life's retreat,
This space was thought's mysterious seat.
What beauteous visions filled this spot!
What dreams of pleasure long forgot!
Nor hope nor joy, nor love nor fear
Have left one trace of record here.

Beneath this mouldering canopy
Once shone the bright and busy eye;
But start not at the dismal void,—
If social love that eye employed,—
If with no lawless fire it gleamed,
But through the dew of kindness beamed,
That eye shall be forever bright,
When stars and sun are sunk in night.

Within this hollow cavern hung
The ready, swift and tuneful tongue:
If Falsehood's honey it disdained,
And where it could not praise was chained;

If bold in Virtue's cause it spoke,
Yet gentle concord never broke,—
This silent tongue shall plead for thee
When Time unveils Eternity!

Say, did these fingers delve the mine?
Or with its envied rubies shine?
To hew the rock, or wear the gem
Can little now avail to them.
But if the page of Truth they sought,
Or comfort to the mourner brought,
These hands a richer meed shall claim
Than all that wait on Wealth or Fame.

Avails it whether bare or shod,
These feet the paths of duty trod?
If from the bowers of Ease they fled
To seek Afflictions humble bed;
If Grandeur's guilty bribe they spurned,
And home to Virtue's cot returned,—
These feet with angel's wings shall vie,
And tread the palace of the sky!

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, SEPTEMBER, 1902

Deaths

	1901	1902		1901	1902
Consumption	13	16	Apoplexy	13	3
Typhoid Fever	4	2	Bright's Disease	13	11
Scarlet Fever	0	0	Cancer	9	4
Diphtheria and Croup	3	1	Accidents and Violence	4	8
Whooping-cough	1	1	Seventy years and over.	21	15
Pneumonia	1	1	One year and under	25	20
Broncho-pneumonia	0	1			

DEATHS IN INSTITUTIONS

	1901	1902
Albany City Hospital	13	7
Albany Orphan Asylum	2	0
County House	4	5
Child's Hospital	2	0
Home for Friendless	0	1
Home for Aged Men	1	0
St. Margaret's House	5	4
St. Peter's Hospital	7	4
Little Sisters of the Poor	3	0

Total number of deaths for September, 1902	119
Total number of deaths for September, 1901	138
Death rate for September, 1902	13.03
Death rate for September, 1901	15.11
Death rate this month, less non-residents dying in institutions	12.16
Births	107
Marriages	53

The number of deaths from communicable and contagious diseases for the month of September, 1902, is extremely low, and indicates the continued healthfulness of the city. The death rate this year, 13.03, for the month of September, as against 15.11 for the corresponding month a year ago, is a record of which the city can be proud. The non-resident death rate 12.16, which is found by taking from the total number of deaths, those of strangers coming to the city and dying in one or other of our institutions, compares favorably with other cities of the second class. The continued decrease in the death rate, which is comparatively constant, is an indication that the health conditions in Albany are of a permanent character and not due to some temporary variation in health conditions.

Births are still reported with some little completeness, one hundred and seven for the month of September being very gratifying. It is to be hoped, however, that the members of the profession will report more promptly births occurring in their practice. It is desirable that all births should be reported for record, within the month in which they occur. While additional births for the month of September will be reported, still in comparison with those reported several years ago, it is an indication of an increasing interest on the part of the practicing physician, in the work of the Department of Health.

Work of Health Physicians

Total number of assignments during the month	40
Total number of calls made during the month	169
Total number of vaccinations made	35

Inspections

During the month 79 meat markets were inspected, 3 milk rooms, 38 milk peddlers, 3 water peddlers, 4 fish markets and 9 fish peddlers. There was found 1 water peddler's violation.

There were 11 privy vaults inspected and condemned during the month, 11 closet nuisances were inspected, 6 drain, 4 plumbing, 3 water nuisances, 1 filthy cellar, 2 filthy vacant lots, 11 filthy premises, 2 manure nuisances, 2 chicken nuisances, 1 garbage nuisance, 1 fish nuisance, 1 smoke nuisance, 2 odors nuisances. Fifty-two re-inspections were made by the sanitary inspectors, 47 orders were served and 58 nuisances abated.

In the Plumbing Department, 224 inspections were made during the month of September, of which 164 were of old buildings, and 60 of new buildings. Thirty-six iron drains were laid, 9 connections with street sewer, 24 tile drains, 27 cesspools, 54 wash basins, 60 sinks, 35 bath tubs, 30 wash trays, 6 trap hoppers in yard, 88 tank closets and 2 shower baths.

One hundred and fifty-six permits were issued by the Department of Health, of which 84 were for plumbing and 72 were for building purposes. Fifteen plans were submitted for inspection, of which 8 were for old buildings and 7 for new buildings. Six houses were tested on complaint; 4 with blue, red test and 2 with peppermint test. Fourteen water tests were made. Twenty-one houses were examined on complaint

The increasing use of soft coal has been made necessary by the recent stringency in the supply of anthracite. For the present it must be tolerated, but it is expected, when the present emergency passes by, that the business interests of the city will resume the use of anthracite coal.

Bureau of Contagious Diseases

	1901	1902
Typhoid fever reported	11	8
Cases of scarlet fever reported	3	1
Diphtheria and croup reported	89	33
Chicken-pox reported	4	2
Measles reported	3	0

Fumigations:
Houses.................. 19 Rooms.................. 43
No. of days quarantined for diphtheria:
Longest........ 62 Shortest........ 5 Average........ 22
No. of days quarantined for scarlet fever:
Longest........ 57 Shortest........ 34 Average........ 45½

It is expected that the statistics of smallpox, occurring during this year, will be given to the profession in the next issue.

In any city, in which there is a reasonable record of contagious diseases, such returns as the above, indicates the thoroughness with which the sanitary regulations of the health authorities are observed. This year for the month of September, we find eight cases of typhoid fever reported, as against eleven a year ago; one case of scarlet fever, as against three a year ago; thirty-three cases of diphtheria this year, as against eighty-nine a year ago, and two cases of chicken-pox, as against four a year ago.

Bender Laboratory Report

Cultures for diphtheria:

Initial positive	Initial negative	Release positive	Release negative
29	21	10	10

Tubes spoiled............ 4
Total........................... 74

Vaccinations in the City of Albany, for the Years 1901-'02

During the month of September, postal cards were sent to the profession requesting the return of the number of vaccination made by them from

January 1st to September 1st, 1902. The following is a statement of the result. These figures are based partly on estimations by the physicians:

Postal cards sent	122	
Postal cards returned	47	
Postal cards returned and not used	6	
Of the 41 postal cards used, total number of primary vaccinations		2,474
Successful	2,061	
Unsuccessful	363	
Not stated	50	
Of the 41 postal cards returned total number of re-vaccinations		2,088
Successful	1,167	
Unsuccessful	613	
Not stated	308	
Vaccinations not classified on the 41 postal cards		1,300
Total number of vaccinations by 41 physicians		5,862

MULFORD'S VACCINE

Number of times Mulford's points were used		1,405
Number of primary vaccinations		823
Successful	679	
Unsuccessful	144	
Number of re-vaccinations		582
Successful	389	
Unsuccessful	103	
Not stated	90	

NATIONAL VACCINE

Number of times National vaccine points were used		363
Number of primary vaccinations		227
Successful	198	
Unsuccessful	29	
Number of re-vaccinations		136
Successful	90	
Unsuccessful	46	

PARKE, DAVIS & CO. VACCINE

Number of times Parke, Davis & Co. vaccine was used		115
Total number of primary vaccinations		100
Successful	90	
Unsuccessful	10	
Total number of re-vaccinations		15
Successful	6	
Unsuccessful	9	

Alexander Vaccine

Number of times Alexander vaccine points were used		222
Number of primary vaccinations		148
Successful	116	
Unsuccessful	32	
Number of re-vaccinations		74
Successful	44	
Unsuccessful	30	

Mulford and National vaccine points were used 1,289 times, with no record of the results.

National and Parke, Davis & Co. vaccine points were used 92 times, with no record of the results.

Pocona Vaccine

Number of times Pocona vaccine points were used		578
Number of primary vaccinations		247
Successful	233	
Unsuccessful	14	
Number of re-vaccinations		331
Successful	154	
Unsuccessful	177	

During the year 1901 as a result of the same method of collecting statistics, out of 99 postal cards sent, 48 doctors made replies. These 48 doctors made 4,531 vaccinations.

Vaccinations made by the Department of Health are as follows:

1901	Mulford	5,030
	National	20
	Total	5,050
1902	Mulford	6,350
	National	2,780
	Total	9,130

Recapitulation of Vaccinations Made in the City of Albany, During the Years 1901-02

Forty-eight physicians, 1901	4,531	
Estimate of balance of profession	2,500	
Department of Health, 1901	5,050	
Total for 1901		12,081
Forty-one physicians, 1902	5,862	
Estimate for balance of profession	3,500	
Department of Health, 1902	9,130	
Total for 1902		18,492
Grand total		30,573

It is therefore probable that between thirty and thirty-five thousand vaccinations have been made in the city of Albany during the last two years.

Report on Vaccination, by Samuel B. Ward, M. D.

In this connection, a most interesting letter has been received from Dr. Samuel B. Ward, in reference to the vaccinations made by him, during 1902. The record is a most complete one and is given below in full.

Pointe-au-Pic, Quebec, Can., July 24, 1902.

Before I left home, you said that you would like to have the results of my vaccinations this spring.

It is easy to say, of one vaccination, that the trifling wound healed up just as the scratch of a clean needle would, and to pronounce the operation a failure. Of another, one may equally say, that the process was typical as to the time of its commencement, the appearances and their order of sequence, and that the operation was a typical success. Between these two, it seems to me that we find a certain number of results which are not the typical vaccinia, and yet something more than the healing of an uninfected scratch. At the same time the infection acts more like vaccinia than anything else that I am familiar with; but small vesicles appear upon and around the wounded part, but they appear too early and do not run the regular course. I have classified such as doubtful. I may add that I have never seen this result in a person who had not been previously vaccinated, nor have I seen a lesion precisely like this follow any other injury, or wound, than vaccination. In other words, I believe that a person may be partially protected by previous vaccination and that subsequent operation may result in an infection which is due to vaccinia and nothing else, but which does not run a typical course. The usual infections with streptococci and staphylococci run a different course from this of which I speak.

I have classified the results as successful, doubtful, and failures, in accordance with the above considerations.

During the past spring and early summer, I made 70 vaccinations, of which 5 passed from observation, without my being able to determine the result, leaving 65 to be reported on.

Of these 65, there were:
Primary....... 3 Secondary....... 18 Multiple....... 44
Of the 3 primary, there were
Successful....... 3 Doubtful........ 0 Failures........ 0
Of the 18 second vaccinations, there were
Successful....... 6 Doubtful........ 1 Failures....... 11
Of the 44 previously vaccinated more than once, there were
Successful....... 4 Doubtful........ 8 Failures........32

There is nothing new, of course, in these results. They simply confirm previous observations. *There were no typical successes when the revaccination was done in less than eight years, but varied between that period and thirty-three years.*

All these vaccinations were made with the National Vaccine Co.'s glycerinated points and there were no results which I would consider untoward. One patient, vaccinated for the second time, after a period of twenty-five years with typical success, had a pretty large inflammatory areola, some enlargement of the axillary glands, considerable constitutional reaction, temperature of 102.0° with some nausea and vomiting, and was confined to bed for four or five days. But there was no ulceration at the point of wound and a typical scab or crust formed. This was the worst of the 65 cases.

If there are any other points on which you desire information, I will gladly give it, if I can.

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY

The semi-annual meeting of the society was held in Alumni Hall, on Tuesday evening, October 14, 1902. The meeting was called to order by the President, Dr. Ward, who, in taking the chair, said that he wished to express to the society his appreciation of the honor conferred upon him by his election to the presidency.

The following members were present: Drs. Babcock, Bingham, Blumer, Boyd, Carroll, Cook, Curtis, Davis, Elting, Hacker, Hinman, Lipes, Lomax, Macdonald, MacFarlane, Mitchell, Murray, Nellis, Papen, Pease, Richardson, Rooney, Sautter, Shaw, Sheldon, Skillicorn, Sweet, M. F., Sweet, E., Traver, Trego, Vander Veer, A., Vander Veer, E. A., Wansboro, Ward, Wiltse and Winne.

1. *Reading of the minutes of the last regular meeting.*
2. *Reading of the minutes of special meetings.*

Dr. MACFARLANE moved that the minutes of both the annual and special meetings should be adopted as printed in the ALBANY MEDICAL ANNALS for June, 1902, and August, 1902. The motion was seconded and carried.

3. *Reception of reports of officers and committees.*

Dr. MACFARLANE presented the report of the Board of Censors.

REPORT OF THE BOARD OF CENSORS

To the Medical Society of the County of Albany:

The Board of Censors respectfully submit the following report:

A meeting was held on July 29th, and the board was organized by the selection of Dr. Mosher as chairman and Dr. MacFarlane as secretary. A communication was presented from Hon. J. Russell Parsons, Jr., secretary of the University of the State of New York, directing attention to an alleged physician practising in Albany in contravention of the laws of the state. This matter was ordered to be investigated, and on August 14th, a meeting was held, at which complaints were entered by witnesses of the illegal practice, prescriptions were adduced in evidence and a communication from the offender was received, which was not satisfactory extenuation. The facts were submitted to the district attorney, and upon his action, the sign was removed, and the practice, we understand, has been discontinued. The papers in the case are submitted herewith.

The Board of Censors wishes to direct the attention of the Society to the difficulty of prosecution in cases of this kind. Suspicion or even general knowledge of contravention of the statute does not constitute evidence in a court of law. The securing of evidence and the presence of witnesses for the conduct of a trial is not the proper function of physicians, and it is recommended to the Society that the Board of Censors be permitted to employ counsel for duties of this kind, which are properly legal and not medical.

The register of physicians in the office of the County Clerk has been examined, and the names of Dr. Joseph Ambrose Cox and Dr. La Salle Archambault, have been entered since the annual meeting of this Society in May, under authority of licenses granted by the University of the State of New York. Respectfully submitted,

J. M. MOSHER, *Chairman.*
A. MACFARLANE, *Secretary,*
A. VANDER VEER,
F. C. CURTIS,
W. G. MACDONALD,
Censors.

Dr. WILTSE moved that the Society authorize the Board of Censors to set aside a sum not to exceed fifty dollars for the prosecution of illegal practitioners. Motion carried.

Dr. SHAW presented the report of the committee appointed at the annual meeting of the Society to investigate the milk supply of Albany.

REPORT OF THE MILK COMMITTEE OF THE MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

To the President and Members of the Medical Society of the County of Albany:

Your committee, which was appointed at the last meeting of the Society to investigate the existing conditions of the milk supply in Albany, has endeavored to gain a comprehensive and unbiased opinion of the quality and purity of the milk sold in the city of Albany.

There have been a number of difficulties to contend with, and a complete and exhaustive examination has not been made. Over three hundred dairymen and dealers have licenses to sell milk in this city. The majority of these are farmers who have a few cows in a small dairy within a short distance from the city, and who peddle the milk themselves. There are a few large dealers who buy a little milk from farmers in this vicinity, but whose largest supply is shipped from distant points. A number of small route peddlers buy their entire milk supply from these dealers.

The committee decided that it would be well to enter into a campaign of education and inform the physicians and dairymen what constitutes pure milk in the hygienic sense of the word, and how it can best be obtained. For this purpose we were fortunate in procuring the services of Mr. G. Moldenhawer, a well-known and practical milk expert. Mr. Moldenhawer came to Albany and addressed a joint meeting of physicians and milkmen in June. The following circular was sent to each member of this Society, and to all the milkmen in the vicinity.

To the Physicians, Dairymen and Milk Dealers of Albany County:

At the last meeting of the Medical Society of the County of Albany, a committee was appointed to inquire into the milk supply of this city. This action by the Society was taken on account of the importance, to physicians, of knowing the purity and quality of the milk and cream used in the feeding of infants and invalids.

The committee feels that the milk dealers and dairymen in this locality are equally with themselves interested in this question and earnestly desires their co-operation and advice. Most dairymen and dealers would improve their methods if the practical importance of so doing was pointed out and they were told where and how to make such improvements. For this purpose, the committee has arranged with Mr. J. Moldenhawer, of New York City, to address a meeting of persons interested in this question. This meeting will be held on Thursday afternoon, May 29th, at four o'clock, in Alumni Hall, Albany Medical College, corner of Eagle and Jay Streets.

Mr. Moldenhawer has had a large practical experience in dairy matters and especially in the production of sanitary milk.

At this meeting the further work of the committee will be considered and it is earnestly hoped that every physician, milk dealer and milk consumer interested in the betterment of our milk supply will attend.

James P. Boyd, M. D., *Chairman.*
George Blumer, M. D.
Henry L. K. Shaw, M. D.

The scant attendance of physicians at this meeting was greatly deplored by the committee, for the average milkman can hardly be expected to care about the condition of his milk as long as the majority of physicians are indifferent. We will assume, however, that the members of this Society are aware of, and recognize, the full importance to this community of sanitarily pure milk. Over ten thousand quarts are consumed daily, and it is to the physician the anxious mother turns for advice about the milk question.

To further educate the milkmen an arrangement was made with Mr. R. A. Pearson, Assistant Chief of the Dairy Division, U. S. Department of Agriculture, who kindly furnished each milk dealer and milk peddler with copies of his pamphlets on "Market Milk—A Plan for its Improvement" and "Care of Milk on the Farm."

The following circular was distributed inviting the co-operation of the dealers, and only six responded:

To the Dairymen and Milk Dealers of Albany and Vicinity:

Gentlemen:—As you have already been informed the Medical Society of the County of Albany has appointed a committee to look into the matter of the milk supply of this district. It is the object of the Society to place before the dairymen and milk dealers some standard of excellence for market milk. It is also proposed to examine such milk, without expense to the dairymen, with the object of determining its purity and its fitness for use, more especially for the use of infants and invalids.

An opportunity was recently offered to the dairymen and milk dealers to gain some idea of the standard which would be required by the engagement of Mr. Moldenhawer, of New York, who gave a talk on the production of pure milk. The committee did not expect that it would be possible for all of the dairymen and dealers to be present at this meeting, and, as a source of information on the subject for those who were unable to be present, the committee has arranged with Mr. R. A. Pearson, of the U. S. Department of Agriculture, to distribute to the milk producers of this district his pamphlet entitled "Market Milk: A Plan for Its Improvement."

The committee further offers to make a bacteriological and microscopical examination of the milk of any of the dairymen or dealers of this district free of cost. If you desire to have your milk examined, you can do so by applying by mail to any member of the Milk Committee. If you do not wish to have your milk so examined, the committee does nothing prejudicial to your interests. It is believed, however, that it would be to the advantage both of the physicians and the milk dealers to have some method of examination carried out.

James P. Boyd, M. D., *Chairman.*
George Blumer, M. D.
Henry L. K. Shaw, M. D.

The committee did not think a fair estimate of the milk of three hundred dealers could be obtained from six examinations, and not having any authority to enforce the request, decided to purchase the milk direct from milk wagons. The test employed was bacteriological. This is the best index of the contamination of the milk, for the bacteria enter the milk from lack of cleanliness on the part of the milker, cows, or utensils, and it also gives a clue to the care in the subsequent handling of the milk. All the bacteriological examinations were made at the Bender Laboratory by Mr. A. J. Douglas and Mr. Donald Boyd, to whom we are greatly indebted.

Sixty-five specimens were examined from fifty different dealers. Of these nine contained pus, and the smear from the sediment of one showed streptococci and staphylococci in abundance. Four of the dealers sold milk in bottles. One driver was seen to fill an empty bottle in the wagon from his can, clap on a cap, and presumably sold it as bottled milk. Three counts were so low as to suggest the use of preservatives. In each instance the milk was "dipped" from none too clean cans. One specimen showed no bacteria after five days, and there were only a few moulds on the plates. The summer was remarkably cool, and the counts would have been much higher if the weather had been hot. In spite of this the number of deaths from diarrhœa in Albany have been very great, so much so that the health officer in his report commenting on these deaths says "That some systematized effort should be made to improve the milk supply in the city."

No. 1, 1,153,750 bacteria per c. c.
Pus present.
No. 2, 137,500 bacteria per c. c.
No. 3, 1,218,750 bacteria per c. c.
No. 4, 318,290 bacteria per c. c.
No. 5, 1,155,000 bacteria per c. c.
No. 6, 88,500 bacteria per c. c.
No. 7, 1,395,000 bacteria per c. c.
No. 33, 1,373,330 bacteria per c. c.
No. 34, 2,128,750 bacteria per c. c.
No. 35, 121,000 bacteria per c. c.
No. 36, 49,500 bacteria per c. c.
No. 37, 1,118,300 bacteria per c. c.
No. 38, 98,500 bacteria per c. c.
No. 39, 1,959,000 bacteria per c. c.
No. 40, 1,771,000 bacteria per c. c.

No. 8,	103,500 bacteria per c. c.	
No. 9	1,457,500 bacteria per c. c.	
No. 10,	9,935,000 bacteria per c. c.	
No. 11,	1,676,250 bacteria per c. c.	
No. 12,	100,666 bacteria per c. c.	
No. 13,	84,000 bacteria per c. c.	
No. 14,	1,115,333 bacteria per c. c.	Pus present.
No. 15,	332,000 bacteria per c. c.	
No. 16,	199,666 bacteria per c. c.	
No. 17,	100,250 bacteria per c. c.	
No. 18,	79,500 bacteria per c. c.	
No. 19,	583,720 bacteria per c. c.	
No. 20,	31,750 bacteria per c. c.	Suspicious.
No. 21,	228,915 bacteria per c. c.	
No. 22,	81,330 bacteria per c. c.	
No. 23,	57,500 bacteria per c. c.	
No. 24,	700,000 bacteria per c. c.	
No. 25,	435,000 bacteria per c. c.	
No. 26,	59,500 bacteria per c. c.	
No. 27,	345,250 bacteria per c. c.	Pus present.
No. 28,	197,000 bacteria per c. c.	
No. 29,	169,000 bacteria per c. c.	
No. 30,	38,250 bacteria per c. c.	
No. 31,	153,500 bacteria per c. c.	
No. 32,	595,000 bacteria per c. c.	
No. 41,	13,500 bacteria per c. c.	Pus present. Very suspicious.
No. 42,	1,957,000 bacteria per c. c.	
No. 43,	623,500 bacteria per c. c.	
No. 44,	20,500 bacteria per c. c.	
No. 45,	18,000 bacteria per c. c.	Very suspicious.
No. 46,	25,750 bacteria per c. c.	
No. 47,	1,302,500 bacteria per c. c.	
No. 48,	19,750 bacteria per c. c.	
No. 49,	33,000 bacteria per c. c.	
No. 50,	2,502,500 bacteria per c. c.	
No. 51,	250,000 bacteria per c. c.	
No. 52,	205,000 bacteria per c. c.	
No. 53,	No growth—few moulds after five days.	
No. 54,	115,000 bacteria per c. c.	
No. 55,	113,500 bacteria per c. c.	Pus present.
No. 56,	2,000 bacteria per c. c.	Pus present. Suspicious.
No. 57,	104,000 bacteria per c. c.	
No. 58,	59,000 bacteria per c. c.	
No. 60,	4,727,500 bacteria per c. c.	
No. 61,	3,066,666 bacteria per c. c.	
No. 62,	1,515,666 bacteria per c. c.	
No. 63,	166,666 bacteria per c. c.	

Professor Veranus A. Moore, of Cornell University, in a recent article on "Bacteria in Milk," shows the importance of a pure milk supply to the community at large and says: "An excessive number of bacteria in milk at any time within seventy-two hours after it is drawn indicates that it has not been properly handled. When this is the case, the milk is liable to contain acids and by-products, which may be injurious to the consumer. There is also the further danger, as exemplified in many epidemics of typhoid fever, diphtheria and other infectious diseases, that the general carelessness in protecting milk against contaminations would permit the entrance into the milk of disease producing bacteria should these be present on the premises where the milk is produced."

The committee are forced to the conclusion that the milk now supplied in Albany is not at all what it should be, and urge that steps be taken to insure a purer milk. The committee are further of the opinion that sanitary milk cannot be sold in bottles at the current price—six cents a quart.

Your committee would therefore recommend that a permanent Milk Committee be appointed which shall have authority from the Society to formulate certain standards and conditions, and to grant certificates to such dairymen whose dairies and milk comply to such standards and conditions; and that this milk should be sold for ten cents a quart; and that the members of this Society, who shall be kept informed of the names of such dairymen, shall recommend and urge its use in the feeding of invalids, small children, and infants.

Respectfully submitted,

James P. Boyd,
George Blumer,
Henry L. K. Shaw.

Dr. **Skillicorn** moved that the report be accepted.

Dr. **Curtis**, in seconding the motion, said that the Society should express its thanks to the committee for their efforts in the investigation of the subject. He felt, too, that milk is very frequently the cause of contagion and that it is a subject in which the Society should be greatly interested.

Dr. **MacFarlane** moved that the same committee be continued and that they be provided with the necessary funds to continue their work, as well as reimbursed for their past expenditures.

Dr. **Shaw** presented a statement as to the expenses incurred by the committee in the investigation of the milk supply.

Dr. **Skillicorn** arose to state that this work should be done by the Board of Health and the Society should not be asked to provide the funds.

Dr. **Cook** said that he had been on the Board of Health for some time in former years and that he had been greatly interested in the milk question. He said that for the price paid it was practically impossible to produce a better quality of milk. Dr. Cook stated the prices paid the producers of milk, which varied from sixty to eighty cents for 40 quarts. He further described certain conditions found at former investigation of the milk supply of Albany made at the instance of the Board of Health. He felt that much could be done to improve the milk supply, but that the work should be done by the committee in co-operation with the Board of Health.

Dr. **MacFarlane's** motion was carried.

Dr. **Macdonald** rose to state that in his opinion both of the motions appropriating funds were illegal. The chair did not sustain Dr. Macdonald's objection, believing that the Society could dispose of its own funds.

4. *Election of members.* No new names were presented.

5. *Motions and resolutions.* None were presented.

6. *Miscellaneous business.* Dr. **Curtis** wished to call the especial attention of the Society to the improvement effected by the painting and papering of Alumni Hall.

7. *The Vice-President's address.*

The Vice-President, Dr. **James P. Boyd**, delivered an address entitled "Progress in Obstetrics."

The **President** declared the paper of Dr. Boyd open for discussion.

Dr. **Vander Veer** said that at one time he practiced obstetrics and that he had listened to the paper with a great deal of interest. He referred to a report of an early epidemic of pueperal fever and commented upon the laxity of technic and precautions, and this report simply illustrated the then existing conditions. Dr. Vander Veer said that in his early practice of surgery he was called upon to operate upon a great many cases of recto-vaginal, as well as vesico-vaginal fistulæ, while in late years he had but very infrequently seen such cases. He referred to the fact that the patients upon whom one is called to operate to-day for lacerated cervix and perineum are much older women than the ones who used to present, which indicates that practitioners are paying more attention to the immediate repair and the better management of these conditions. He also commented upon the use of the douche in the early days and the bad effects following its application. The object in obstetrics is simply to aid nature in her attempt to restore woman to health.

Dr. Cook stated that he had been much interested in Dr. Boyd's paper, as well as Dr. Vander Veer's remarks and heartily endorsed the sentiment that one should give nature a chance and so far as possible leave the patient alone during the puerperium.

Dr. Lipes stated that one reason why women who came to the surgeon for repair of the cervix and perineum are older than formerly is because women are not married so young as they were formerly. To prevent tear of the perineum one should place the patient in the lateral position, give plenty of chloroform and control the descending head with the hands.

8. Dr. Vander Veer read a paper entitled: "Surgery of the Stomach, with a Report of Cases."

The President declared the paper of Dr. Vander Veer open for discussion.

Dr. Macdonald said that he was greatly interested in the very excellent paper of Dr. Vander Veer. He said that this was a department of surgery in which great advances had been made in the past ten years. He thought that surgery of the stomach could be divided into two classes; first for non-malignant disease; and secondly, for malignant disease. The first group of cases embraced fibrous stricture due to spasm or ulcer and gastroptosis. Much can be done to improve the condition of this class of cases, as well as cases of chronic dyspepsia with stasis of the gastric contents, and the best results of gastric surgery lie in this direction.

In the second group, that is, malignant disease, the progress had also been great and the mortality had been decidedly lessened until according to the recent statistics of Mikulicz and Maydl only about sixteen per cent. died. The best results have been those of Kocher, whose mortality in this class of cases has been only eight and seven-tenths per cent. The surgeon to-day is inclined to complain because the clinician does not refer the cases for operation at a sufficiently early stage. The question of diagnosis is very important and at times very difficult. The physical examination is often unsatisfactory and there is no pathognomic symptom. Operation is best performed as early as possible, before metastasis have occurred. If surgery can benefit twenty-five per cent of the cases it is something to be undertaken. He differed with Dr. Vander Veer regarding gastro-enterostomy, believing that while it afforded comfort and prolonged life in many instances, nevertheless a complete operation should be undertaken if there is a reasonable chance of success. Gastro-enterostomy was best performed in cases of perigastric malignant adhesions, with nodes in the liver, involvement of the deep glands or infiltration of the peritoneum about the gastrohepatic ligament. Comparatively few cases are suitable for gastrectomy. He did not believe in the use of the Murphy button in cases of gastrectomy; and cases in which the diseases extends well up toward the cardiac orifice are unsuitable for the operation. In a case of his own the speaker said that he had sewed up the end of the œsophagus and had attached the jejunum to the lower end of the œsophagus with a Murphy button. The jejunum was then attached to the duodenum by a lateral anastomosis.

Dr. Lipes moved to adjourn. Seconded. Carried.

Arthur W. Elting, *Secretary.*

Samuel B. Ward, *President.*

Medical News

Edited by H. Judson Lipes, M. D.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR SEPTEMBER, 1902.—Number of new cases, 40. *Classification of cases:* dispensary patients receiving further care, 2; district cases reported by health physicians, 3; charity cases reported by other physicians, 10; total number of charity cases, 15. Moderate income patients, 25. Old cases still under treatment, 22. Total number of patients receiving nursing care, 62. *Classification of diseases:* (new cases) medical, 12; surgical, 5; gynæcological, 22; dental, 1; died, 3. *Visits of Guild nurses:* Number of visits with nursing treatment, 498; for professional supervision of convalescents, 168; total, 666. Cases were reported to the Guild by the city physician, by two of the health physicians and by fifteen other physicians. Dentist, one.

Special Obstetrical Department, August and September, 1902: Obstetrician and assistant obstetrician in charge of the cases. Medical students in attendance, 4; nurses, 3; patients, 7. Number of visits by obstetrician, 25; by assistant obstetrician, 4; by medical students, 27; by Guild nurses, 38. Total number of visits for the month, 94. Number of patients on the waiting list, 5.

THE DEATH OF TRUSTEE WILLIAM H. WEAVER.—The Albany Medical College has lost a good friend and a staunch supporter in the death of one of our honored Board of Trustees, William H. Weaver, of this city. He was interested also in the welfare of the Albany Hospital; serving as one of the Board of Governors for a number of years. Mr. Weaver was buried by the Masonic fraternity, with knightly honors, by Temple Commandery No. 2, K. T., and by the Episcopal church, of which he was a very active member.

ANNUAL STUDENTS' RECEPTION.—The annual reception of the students of the city was tendered by the Y. M. C. A. on Tuesday evening, October 14th, and was well attended, especially by the students at the Albany Medical College. A most enjoyable evening was spent in the genial hospitality of the association, including an entertainment in Jermain Hall, followed by refreshments. The evening's fun wound up with games of basket ball, in which the team from the Medical defeated one from the Law with a score of 16 to 3.

COLLEGE OF PHARMACY OPENS.—The College of Pharmacy began its twenty-second session by suitable exercises on Monday evening, October 6th, in Alumni Hall. President Raymond and the college faculty sat upon the platform. After a few words of welcome by Dr. Tucker, Dr. Huested delivered the opening address. Chancellor Raymond then spoke in his usual kindly manner urging the students to make the most of their opportunities. The exercises closed with the announcements of Secretary Bradley.

A NEW AMBULANCE STABLE.—At last the Albany Hospital is to have its ambulance service placed on a footing with any other hospital in the country. A new stable is to be erected, just north of Pavilion F, on the hospital grounds, and will be equipped in the same manner as the fire department houses, so that in future the ambulance can be ready and at the hospital as soon as the surgeon can make his preparations to answer the call.

UNION COLLEGE ANNOUNCEMENT.—The treasurer of Union College has just published a pamphlet giving the first detailed report of the financial interests of the college that has appeared in many years. This report shows a most satisfactory condition of the finances of this institution and shows a total of $56,398 received as gifts during the past year.

INSTALLATION WEEK, NORTHWESTERN UNIVERSITY.—The installation of President Edmund J. Janes, of Northwestern University, took place at Evanston, Ill., on October 21, 1902. The festivities attending the inauguration of this gentleman occupied four days and were largely attended by Alumni as well as many prominent representatives of other institutions in this country and in the old world.

MEDICO-LEGAL BULLETIN; A NEW JOURNAL.—*"Medico-Legal Bulletin"* is the title of a new journal whose first number appeared in October. It will devote its pages entirely to matters of interest to the medical profession from a legal standpoint. The initial number contains several well-written, original articles on laws governing the practice of medicine and surgery, defining the physician's liability to patient and state. It also includes chapters devoted to important state Medical Laws, Judicial Decisions, and Comments and Queries on Medico-Legal topics.

PERSONAL.—Dr. C. W. HAMM (A. M. C. 1893), has removed from Poestenkill, N. Y., to No. 607 Pawling Avenue, Troy, N. Y.

—Dr. ARTHUR J. BEDELL (A. M. C. 1899), has been appointed to the house staff of the Wills Eye Hospital, Philadelphia, Pa.

—Dr. RICHARD A. WOODRUFF (A. M. C. 1886), has located at Pittsfield, Mass. Dr. Woodruff spent a year in post-graduate work at the Albany Hospital and Johns Hopkins University and then located at Philmont, N. Y., from which place he has gone to Pittsfield.

—Dr. NISHAN A. PASHAYAN (A. M. C. 1901), who has been assistant at the St. Lawrence State Hospital, has been appointed from the civil service list junior physician at the Long Island State Hospital.

—Dr. WILLIAM W. SANFORD (A. M. C. 1899), medical interne at the Matteawan State Hospital, has been appointed junior assistant physician at the Long Island State Hospital.

—Dr. FLAVIUS PACKER (A. M. C. 1893), first assistant physician at the Matteawan State Hospital, resigned February 14, 1902, to accept the position of superintendent of the Insane Pavilion of Bellevue Hospital, New York City.

—Dr. Charles T. La Moure (A. M. C. 1894), has been promoted to be second assistant physician at the Rochester State Hospital, Rochester, N. Y.

—Dr. Jesse M. W. Scott (A. M. C. 1896), has been promoted to the position of first assistant physician at the Matteawan State Hospital to fill the vacancy occasioned by the resignation of Dr. Packer.

—Dr. John M. Griffin (A. M. C. 1901), has completed his term of service in the Albany Hospital, and has begun practice at Warrensburgh, N. Y.

—Dr. John Campbell (A. M. C. 1843). We have had a letter from Dr. Campbell, who is one of the oldest living graduates of our college. He is also the oldest living medical officer of the U. S. Army (now retired). His health is very good for a man of nearly 82 years and he is in hopes of reading a report of his class at our next reunion.

Book Reviews

A Treatise on Diseases of the Anus, Rectum and Pelvic Colon. By James P. Tuttle, A. M., M. D., Professor of Rectal Surgery in the New York Polyclinic Medical School and Hospital. New York: D. Appleton & Company, 1902.

This volume deals with one of the most important departments of medicine and surgery, and one which is progressively attracting more and more attention. A long experience in one of the largest rectal clinics in the world has peculiarly fitted the author to discuss the subject in an exhaustive manner. While in great measure the volume reflects the personal experience of the author, much attention is, nevertheless, given to the ideas and results of other operators and in every instance the reader is afforded an opportunity to choose between the different methods of management or treatment proposed.

It is by no means exclusively a surgical work, for much attention is devoted to the medical management of the diseases of the anus, rectum and pelvic colon. A great deal of attention has been devoted to the examination, diagnosis and local treatment of rectal diseases, and the chapters devoted to these subjects are nowhere excelled in the English language; chapters which every practising physician and surgeon could and should read with much profit, for in no department of medical science is the general practitioner more lamentably weak than in the examination, diagnosis and management of rectal disorders.

The volume is divided into twenty-five chapters, the arrangement of which is most excellent. Beginning with an unusually clear, scientific as well as practical chapter upon the embryology, anatomy and physiology of the parts under discussion; the author next considers the malformations of the anus and rectum, their significance and the methods of treatment.

Next comes the examination and diagnosis of rectal disorders, following which are several chapters devoted to inflammatory conditions of the anus and rectum, acute and chronic inflammations, tuberculosis, venereal diseases and non-specific ulcerations of the parts being each of them exhaustively discussed.

Fissures, abscesses, fistualæ and stricture, resulting as they so often do from inflammatory processes, are next considered.

One of the most instructive chapters in the volume is devoted to constipation, obstipation, and fecal impaction. If this chapter could be carefully studied by every practising physician, many patients would be relieved of this most disagreeable condition.

The author devotes considerable space to a discussion of the valves of Houston and their importance in the causation of constipation. His conclusions are that these valves play but a very insignificant role in the etiology of the disorder, and the valvotomy as proposed by Martin and Pennington has in his experience been of but slight benefit.

Pruritus ani is the subject of a brief chapter, after which comes one of the most satisfactory chapters in the volume, namely, that devoted to the subject of hemorrhoids. As regards the treatment of this condition, the author's experience has led him to adopt a modified Whitehead operation, the results of which have been most satisfactory. Coming at a time when the Whitehead operation has so largely fallen into disuse and when the other less radical and effectual operations are so decidedly in the ascendant, this word in favor of the Whitehead operation from so high an authority should be especially emphasized.

After a chapter devoted to prolapse of the rectum, the author presents an exhaustive treatise upon benign and malignant neoplasms of the anus and rectum, following which is a chapter in which the various methods of extirpation of the rectum are presented. Colostomy, being a natural sequence of certain rectal disorders, is next considered, with a discussion of the various methods of performing it.

Foreign bodies in the rectum, injuries of the rectum and neuroses of the rectum are the subjects of the concluding chapters of the volume which ends with a brief, but adequate, consideration of recto-colonic alimentation.

The volume is profusely illustrated throughout, there being 338 illustrations in the text, together with eight colored plates. The illustrations cannot be too highly praised, both as to their selection and execution, and they add not a little to the value and instructiveness of the work.

As an example of book-making, the volume approximates the very highest type and is certainly a great credit to the publishers who have done so much to advance the standard of American medical publication.

Written as it has been in the midst of an active practice, this book is almost a marvel for accuracy, conciseness and cohesiveness and reflects great credit upon the author. It will undoubtedly take first rank among all the works devoted to rectal surgery and should be in the library of every physician.

A. W. E.

Transactions of the American Dermatological Association, at its Twenty-fifth Annual Meeting, held in Chicago, May, 1901. 200 pp. FRANK HUGH MONTGOMERY, M. D., Secretary.

More than one would at first thought suspect lies in the value of a publication of this sort in the very fact that it is a Society Report. Papers on a special subject delivered to a gathering of those of its own specialty are prepared from quite a different point of view from those to a more general assemblage. Their value lies largely in this. A man is not likely to beat over old straw. The material he presents must be in some way a contribution, either of new matter or of personal opinion which is to be defended, and he traverses ground familiar to his audience, and what they say in discussion is likewise a contribution. Besides, an annual volume is to some degree a milestone. This volume marks very well in certain directions the progress and thought to date on a specialty that lies intermediate between general medicine and surgery as is suggested by the president in his address. The topics brought forward are generally illumined by the words expressing the experience of the competent men in this branch of the work and they are all well worthy of study.

Dr. Douglas W. Montgomery, of San Francisco, has a thoughtful article on "The Causes of Streaks in Nævus Linearis," which some of us would known by Ichthyosis Hystrix; "Vesicular and Bullar Lesions in Connection with Lichen Planus," lesions farthest from the disease in the general thought of it, is the subject of another paper and discussion; "Sarcoma and Sarcoid Growths," by Dr. James C. Johnston, will repay the careful study of every one. Drs. Sigmond Politzer and George Henry Fox had an evening exhibition of lantern slides of smallpox, which in its modified form now prevails, and the interesting experience is noted by good observers in connection of having secured successful though not typical vaccination during convalescence from smallpox. There is an interesting series of papers on diseases of the nails, and a Roentgen ray report by Dr. Pusey.

Devoid of triteness on which busy men can waste no time and narrating the observations and study of active workers there is hardly a dull page in the book. F. C. C.

Photographic Atlas of the Diseases of the Skin. Physicians' Edition. A Series of Eighty Plates, Comprising More than One Hundred Illustrations, with Descriptive Text, and a Treatise on Cutaneous Therapeutics. By GEORGE HENRY FOX, A. M., M. D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York; Consulting Dermatologist to the Board of Health, New York City; Physician to the New York Skin and Cancer Hospital, etc. Philadelphia and London: J. B. Lippincott Company, 1902.

The sixteenth and last fasciculus of Fox's Atlas has been issued, making a total of 228 pages of text, 80 plates, and the letter press descriptive pages facing the plates. The *Atlas* is a quarto, printed on heavy paper in the best style, and the plates show the most modern development of the "half-tone" process, in colors, and are really works of art, not only from the printers' standpoint, but from their accuracy, and from the delicate shading which is often in attempts of this kind difficult to attain. The lesions are faithfully represented. The text has already received favorable comment in the ANNALS. Dr. Fox is eminently practical, and, when occasion requires, properly incisive or ironical in confronting popular superstitions and misapprehensions. The price of the *Atlas* is within the reach of all, and its presence within the reach of the practitioner should diminish the frequency of the diagnosis of eczema and the prescription of arsenic.

Essentials of Histology. By LOUIS LEROY, B. S., M. D., Professor of Histology and Pathology in Vanderbilt University, Medical and Dental Departments; Bacteriologist to the State of Tennessee; Pathologist to Nashville City Hospital; Associate Editor, Medical Examiner and Practitioner, etc. Second Edition. W. B. Saunders & Co., Philadelphia and London.

This book belongs to a series of Question Compends published by Saunders & Co., and the subject matter corresponds well to the title, consisting of the essential facts of histology.

The facts are not always stated clearly as the following sentence will show: "In this stage the cell is as has been described, above the chromatin filaments being arranged in a network" (page 25). The chapters are short and concise, and at the end of each chapter there is a list of questions which assist the student in memorizing the text.

The illustrations are numerous and the reproductions of drawings are good, but the photomicrographs are not distinct and do not really illustrate.

We cannot recommend this book for the use of students while learning histology, but it would be of service for a quick review previous to an examination. H. W. C.

Current Medical Literature

SURGERY

Edited by A. Vander Veer, M. D.

Temporary Colostomy in Inflammatory Stricture of the Rectum. (La Colostomie temporaire dans le Retrecissement inflammatoire du Rectum.)

C. SOULIGOUX and A. LAPOINTE. *Gazette des Hopitaux, 74th year, No. 127, November, 1901.*

The results of the radical treatment of benign stenosis of the rectum by extirpation have been for the most part unsatisfactory. The writers report a case of a woman of 29 who had been troubled with a very obstinate constipation for many years, associated at times with much pain, tenesmus and the discharge of blood, pus and mucus from the rectum. There was no evidence whatever of syphilis and the cause of the inflammatory stricture seemed obscure. The stricture, which was situated a short distance above the internal sphincter, was gradually dilated and considerable relief was obtained. Two years later the patient returned with a recurrence of all the old trouble, and owing to an obstruction of the bowels it was necessary to do a colostomy; the intestinal contents were thus diverted from the stricture which was treated locally through the anus and rapidly improved. An attempt was made to pass a sound through the stricture from the anus but this was impossible. Finally a small catheter was passed downward from the colostomy wound through the stricture are for the most part unsatisfactory and the mortality is rather attached and drawn through and by this device larger and larger catheters were gradually passed until a bougie two centimetres in diameter slipped through the stricture easily. After nine months of this treatment, the stricture being almost completely cured, the colostomy wound was closed and the intestinal contents allowed to follow the normal course. The result thirteen months later was most satisfactory and patient experienced no trouble whatever with the rectum.

There are comparatively few cases on record in which this method of treatment of a benign stricture of the rectum has been used, but in most of these cases it was eminently satisfactory. Attempts at extirpation of the stricture are for the most part unsatisfactory and the mortality rather high. Then, too, the technical difficulties where a chronic inflammation has existed for a long time are very great. A very important factor in the successful treatment of benign strictures of the rectum is the prevention of the access of fecal matter to the diseased area. Should it be impossible to dilate the stricture after doing a colostomy, the patient would be about as well off as after the majority of operations for removal of the stricture.

The method advocated is essentially that used so successfully in the management of stricture of the œsophagus, in which, after gastrostomy, the stricture is dilated either from above or below.

The Diagnosis of Acute Glanders in Man. (Zur Diagnose des acuten Rotzes beim Menschen.)

Jos. Koch. *Archiv für klinische Chirurgie, Bd. LXV., Hft. 1, 1902.*

The writer undertakes the study of the clinical picture of acute glanders as it occurs in man and reports a case which came under his observation. This case was studied very carefully clinically as well as pathologically and bacteriologically. The patient, a veterinary surgeon, had spilled a culture of glanders upon the floor of his laboratory a short time before the onset of the disease. The first case presented pulmonary symptoms to which were subsequently added the characteristic pustular and ulcerative skin lesions. Death occurred on the twelfth day. At autopsy the oldest and most marked lesions were located at the apices of the lungs, less marked lesions being found in other viscera. Cultures and animal experiments proved the case to be definitely one of glanders. The writer feels justified in assuming this to be a case of primary pulmonary glanders, although there are but very few cases on record in which the disease has seemed to be primary in the lung.

The writer reviews the literature upon the subject of glanders in man and formulates a certain clinical picture indicative of the disease. After the incubation period of from three to five days the patient manifests general symptoms resembling typhoid or some septic process. In this stage the diagnosis is practically impossible, because there are no characteristic symptoms. In most cases foci appear either in the skin, muscles or joints of the extremities. These foci are usually of a purulent character. In fully one-half of the cases there is an involvement of the upper air passages, especially the nose, which is often associated with an erysipelatous swelling of the bridge of the nose. Toward the end of the disease, usually two or three days before death, the characteristic pustular and ulcerative lesions of the skin occur. These are due to a dissemination of the bacilli throughout the system by means of the circulation and result from small thrombi of the bacilli in the cutaneous vessels. The skin eruption presents at first as a red spot, from a pin head to a split pea in size, which rapidly passes into a vesicle, and then into a pustule, and finally may present as an irregular ulcer, around which there is a decided tendency for smaller pustules to group themselves. The disease usually lasts from two to four weeks.

The diagnosis is made positive by cultivation of the glanders bacilli from the foci of infection and the inoculation of the cultures or contents of the foci into male guinea pigs or field mice, in both of which animals an acute orchitis develops in two or three days.

The Diagnosis of Tuberculous Peritonitis in Children, Based upon the Study of Fifty-four Cases. (Ueber die Diagnose der tuberculosen Peritonitis bei Kindern auf Grund von Fällen eigener Beobachtung.)

A. A. Kissel. *Archiv für klinische Chirurgie, Bd. LXV., Hft. II.*

The careful study of a large number of cases has led the writer to attempt to emphasize certain points in the diagnosis and to draw more general attention to the subject. The cases reported occurred in the St. Ogla Hospital in Moscow.

The writer presents in more or less detail the clinical histories of twenty-one of the cases accompanied by autopsy reports of those cases which died. In most of the cases symptoms of the disease had existed only from a few weeks to a few months.

Certain points in the diagnosis are especially emphasized:

(1) A thickening of the peritoneum which can often be demonstrated in the early stages.

(2) The existence of tuberculosis in other parts of the body, especially in the pleuræ.

(3) The presence of enlarged, lymphatic glands.

(4) The rapidity of onset and development.

(5) The existence of most cases of demonstrable ascites.

The writer discusses the so-called chronic, serous peritonitis of children and concludes that in most if not all the cases the process is really a tuberculous peritonitis. Abdominal conditions in children resembling tuberculous peritonitis, but due either to cardiac or hepatic disease, are also discussed. Seven of the writer's patients were two years of age, and nine were three years of age. The others ranged from four to thirteen years.

Laparotomy was performed in 35 cases, of which 27 recovered.

From his observations the writer draws the following conclusions:

(1) Tuberculous peritonitis is of more frequent occurrence in children than is usually supposed.

(2) One can assume that almost all cases of so-called spontaneous ascites are cases of tuberculous peritonitis.

(3) The exudate in tuberculous peritonitis is not infrequently absorbed under general tonic treatment, and the children recover completely.

(4) The onset of the disease is usually insidious, the child becoming pale and wasted without any evident cause.

(5) The diagnosis is made more easy by the presence of a serous pleurisy.

(6) Thickening of the peritoneum, as demonstrated by pinching the abdominal wall into a fold, is the most valuable diagnostic symptom.

(7) In tuberculosis peritonitis the fluid in the peritoneal cavity is rich in albumin and of high specific gravity.

(8) Frequently with slight objective symptoms and with good condition of the patient, one will find the entire peritoneum covered with a thick layer of quite fresh tuberculous tissue.

(9) The diagnosis will be most difficult in cases of chronic ascites associated with tuberculous pericarditis—a rare affection.

(10) Only in rare instances does tuberculous peritonitis begin with severe symptoms.

MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

Anæmia Splenica with Ascites (*Banti's Disease.*) (*Ueber Anæmia Splenica mit Ascites* [*Banti'sche Krankheit.*])

H. Senator. *Berliner klinische Wochenschrift, No. 46, 1901.*

In 1894 Banti, of Florence, called attention to a disease characterized by anæmia and great enlargement of the spleen and usually associated with cirrhosis of the liver and ascites. To this disease entity was given the name of "Banti's disease." Banti described three stages of the disease. The first stage was characterized by enlargement of the spleen and anæmia, the enlargement of the spleen being primary. This stage might last from three to ten years and was followed by the second or transitional stage which was characterized by a diminution in the secretion of urine, increased urates and urobilin and frequently the presence of bile in the urine. This stage lasted but a few months and led to the third or stage of ascites. The ascites developed slowly and painlessly and was associated with an increase of the anæmia. The temperature was often elevated in the evening. This stage usually lasted a few months, rarely a year, and ended in death.

The disease had been previously described under the name of anæmia splenica, but never had it been so carefully studied.

Banti described very carefully the changes occurring in the spleen, which were mainly characterized by a marked increase of the interstitial tissue, a condition which he called "fibroadenia."

He also described areas of sclerosis in the splenic and portal veins as well as a cirrhosis of the liver originating around the branches of the portal vein. The bone marrow was red even in the long bones; the other organs showed nothing characteristic. Banti assumed the spleen to be the primary seat of the disease in which certain poisonous substances were produced which caused the anæmia as well as the cirrhosis of the liver. Although many attempts have been made, no definite cause of the disease has been discovered. The consensus of opinion, however, seems to be that the spleen is the original seat of the disease. It may also be possible that the poison is conveyed to the spleen from some other organ, for gastrointestinal disturbances are often noted in the very beginning of the disease.

The disease does not always follow the exact course described by Banti, for there are certain cases in which ascites with anæmia and splenomegaly occur wthout cirrhosis of the liver.

In certain cases one can assume the anæmia as the cause of the ascites. Other factors are probably involved, as for instance an obstruction of the lymph passages. Another very important and characteristic feature of the disease upon which Banti laid but little emphasis is the tendency to hemorrhage, gastro-intestinal, nasal, pulmonary, genito-urinary, as well as purpura. The blood changes are oligocythæmia, oligochromæmia and leukopenia.

Poikilocytosis, an increase of the blood platelets, as well as of the alkalinity of the blood are also fairly characteristic of the disease.

As to the etiology of the disease but little is known, which is also true of the predisposing factors.

The prognosis is rather uncertain; a number of cases have been improved by splenectomy. Maragliano has collected eleven cases of splenectomy in Banti's disease, nine of which were cured and two died of hemorrhage.

The treatment is medical and surgical. Medically, good food and hygienic surroundings as well as arsenic, iron and iodine are of most value. Surgically, splenectomy is usually indicated if the condition of the patient allows. The difficulties of the operation as well as the great danger of hemorrhage should be borne in mind.

Can the Diagnosis of Pernicious Anæmia be Made from the Blood? (*Kann die Diagnoše der Anæmia perniciosa ans dem hæmatologischen Bilde festgestellt werden?*)

KÖRMÖCZI. *Deutsche medicinische Wochenschrift, 1902, No. 1.*

For a long time an effort has been made to diagnosticate pernicious anæmia by a typical blood picture, but the conclusions drawn have been too hasty. Ehrlich and his pupils have claimed for some years that the diagnosis of pernicious anæmia can be made when the blood contains macrocytes and megaloblasts. This conclusion has been much disputed. The author examined a number of cases of secondary anæmia and in none did he find megaloblasts, although in some of these cases the bone marrow was affected.

Fourteen cases of pernicious anæmia were examined, but as five only came to autopsy, these alone are considered.

The examination of the blood in these cases showed that it did not always contain macrocytes and megaloblasts, that it did not always vary from the picture of a secondary anæmia and that on the blood picture alone the diagnosis could not always be made. Recently there has been much discussion about a fatal form of anæmia, in the blood of which there are no nucleated erythrocytes. The author has never seen such a case and agrees with Lazarus that these characteristic megaloblasts may not enter the circulation and then an error results.

It was not possible for the writer to determine what condition induced or prevented the entrance of the nucleated red cells into the circulation. He found, however, that they were always present in post mortem blood and that they were more likely to be present just before death. He believes that the bacterial toxines may cause the nucleated red cells to disappear from the circulation.

From these facts the conclusion is drawn that the absence of megaloblasts has no special diagnostic value. To what extent is the positive finding of megaloblasts of diagnostic value? When he considers his own experience only, the diagnosis of pernicious anæmia could be based on their presence. It would be regarded as the tubercle baccillus whose presence is positive and absence not negative.

There have been cases described with nucleated red cells which have recovered, and it is possible that a case of pernicious anæmia might recover. The development, nature and action, however, of the megaloblasts is not well understood and therefore should not be used as a certain diagnostic sign.

They may occur too in other diseases, as tumor of the bone marrow and hæmoglobinæmia due to poisons.

The conclusions are:

1. The blood picture of pernicious anæmia cannot in many cases be differentiated from that of secondary anæmia, although the post mortem examination of the bone marrow in these cases shows a megaloblastic type.

2. The blood of pernicious anæmia is often of a megaloblastic character, but oftener macrocytic. This symptom is pathognomonic only when supported by other conditions of the blood and by the clinical picture.

Chloroma.

Report of a Case by Byron Bramwell. *The Lancet, February 22, 1902.*

The patient was a married man, aged 25 years, who discovered a small glandular swelling on the left side of the neck, and a week later a similar swelling on the opposite side, in October, 1900. In the following January an eruption developed on the front of the chest and gradually extended over the greater part of the body. In February rheumatic pains were felt. In April the face and gums swelled, the eyes became watery and painful and the voice husky, and some deafness developed. On May 22nd, the patient was much debilitated and had lost a stone in weight. He was not anæmic, and there was no excess of white corpuscles. The face was swollen, the swelling being chiefly due to the presence of nodular swellings in the skin, œdema of the skin, and glandular swellings in the neck and pærotid regions. The voice was husky, the breathing was attended with some stridor, there was frequent cough, and the patient could not breathe through the nose. The pulse was quick and the temperature was 100.6° F. The eruption consisted of copious flat-topped nodules varying in size from a pin head to a six-penny piece. In many places the nodules were confluent and then produced a uniform raised infiltration of the skin; they were painless, not adherent to the deeper parts, and for the most part of a slaty-grey or purple-grey color, some of them being yellow in their centres. The gums were enormously swollen, firm, and of a dark purple color, and the right tonsil was much swollen and was also firm and of a dark purple color. conjunctivæ were infiltrated with a translucent fleshy-looking growth, in which vessels could be seen ramifying. There was no exophthalmos. The optic discs were normal. The glands on each side of the neck below the jaw were swollen, hard and painless. The parotid glands appeared to be enlarged. There was some symmetrical swelling in each temporal region. The splenic dulness was increased. The liver was somewhat enlarged. The urine was normal. Microscopic examination of the skin, portions excised during life, showed that the case was not one of melanotic sarcoma: the nodules consisted of lymphoid deposits and were entirely made up of small unnucleated round cells. The blood count showed that the red corpuscles numbered 4,480 and the white 8,000 per cubic millimetre. The white corpuscles were almost entirely lymphocytes, chiefly large lymphocytes, with large nuclei and clear, non-granular protoplasm. The micro-organisms were detected during the course of the disease. The skin eruption increased and many of the nodules became yellow, some yellowish-green, and a few on the face distinctly green in color. The face became much more swollen. The patient died on June 24, 1901. At the post mortem the nodules were all distinctly green.

PATHOLOGY

Edited by George Blumer, M. D.

Concerning the Transplantation of Embryonic Tissue into the Ovary and the Formation of Ovarian Cysts. (Ueber Transplantationen von Embryonalgeweben ins Ovarium und die Bildung von Ovarialcysten.)

ROSARIO TRAINA. *Centralblatt für allgemeine Pathologie u. pathologische Anatomie, Band XIII, No. 2, 1902.*

In this article the author records an extensive series of experiments in which he transplanted various portions of the embryos of guinea pigs removed by Cæsarian section into the ovaries of other guinea pigs. Before discussing the results he reviews the literature of transplantation of organs and brings out a number of facts which have been elicited by other experimenters. He shows that the possibility of life and growth in a transplanted organ depends partly upon the grade of organization of the transplanted tissue, and partly upon the character of the organ into which it is transplanted. As a rule the less organized the tissue is, the better chance it has for life in a transplanted position. Transplanted tissue seems to have a better chance for life and growth if it is placed in tissue of a structure similar to itself.

The authors experiments led him to conclusions, first of all regarding the possibility of embryonic tissue living when transplanted into the ovary; secondly, with regard to the possible origin of certain forms of ovarian cysts.

He showed by transplanting portions of the upper and lower jaws of embryos whilst still in a cartilaginous condition that the cartilage could go on and gradually develop into bone.

His most interesting results referred to the production of certain types of ovarian cysts, particularly the forms of ovarian cysts containing bone cartilage, and so on. In quite a large proportion of his experiments he found that the eventual result of transplanting embryonic material was the formation of definite cysts in the ovary, sometimes microscopic in size, sometimes macroscopic, and causing considerable enlargement of the organ.

From these results the author comes to the conclusion that the more complicated ovarian cysts containing different structures are probably due to the transplantation of embryonic material. He seems to think that both the so-called dermoid cysts, as well as the teratomata, originate in this way. He thinks that the reason these cysts occur in the ovary much more frequently than in other organs is not because embryonic tissue does not become misplaced in other organs, but on account of the fact that the ovary has an abnormally large blood supply and very strong possibilities in the way of proliferation.

Concerning the Action of Subcutaneous Gelatin Injections upon Experimentally Produced Kidney Disease. (Ueber die Einwirkung subcutaner Gelatine-Einspritzungen auf experimentell erzeugte Nierenerkrankungen.)

H. STURSBERG. *Archiv für pathologische Anatomie und Physiologie und für klinische Medicin, Band 167, Heft 2, 1902.*

The author begins his article with the statement that during the last few years the subcutaneous injection of gelatin solutions has been shown to be of value in controlling certain forms of internal hemorrhage. He states that while according to some authors the injection is without danger, according to others it might produce serious results, especially in individuals having a previous kidney lesion. He cites several cases from the literature where serious results occurred from the injection of gelatin in nephritikers. The author made a series of experiments on rabbits, with the object of determining the cause of the dangerous effects in these cases, in which he injected two varieties of gelatin, both into healthy animals, and into those in whom a previous nephritis had been induced by the injection of the chrome salts.

As far as normal rabbits were concerned he found that the injection of even quite large doses of gelatin produced no untoward effects. The most that he observed was a slight albuminuria, and this was only produced in one variety of gelatin, which he calls "gelatin 2," and which corresponds to the ordinary gelatin used for bacteriological work.

As regards the action of the gelatin injections on animals with nephritis he found that a distinct effect upon the kidney was produced by this gelatin 2. A substance was found in the urine which he believes to be gelatin in a hydrated form, and in some cases almost complete suppression of urine occurred. In the cases where the untoward effects occurred he was able to find definite histological changes in the kidneys in the form of thrombosis of certain of the blood vessels, especially in the glomeruli, and a peculiar form of exudate into Bowman's capsule.

From the fact that these symptoms were produced by one variety of gelatin, and not by another, he concludes that certain preparations contain harmful substances, and these he thinks to be bacterial products.

His ultimate conclusion of practical value is that in using gelatin injections in the human being, it is necessary to be sure and have a chemically pure preparation of gelatin, and that when this precaution is taken the use of this form of treatment is safe in individuals suffering from kidney lesions.

Malacic and Rachitic Bone Changes Produced in Young White Rats by Infection. (Durch Infection hervorgerufene malacische und rachitische Skeletveränderungen an jungen weissen Ratten.)

B. MORPURGO. *Centralblatt für allgemeine Pathologie u. pathologische Anatomie, Band XIII, No. 4, 1902.*

The author in this paper gives the results of a series of experiments on young white rats with a coccus capable of producing skeletal changes, resembling in some ways rickets, and in others osteomalacia.

In a previous paper, published about a year ago, the author had given the results of his experiments with the same organism upon adult animals. He had made some attempts at that time to experiment with young animals, but found that after inoculation with this coccus a very long period of incubation occurred before the characteristic changes resulted, so that his young animals reached adult life before the bone changes were apparent.

In his present series of experiments he used exceedingly young animals, which he inoculated at the age of a few days. The animals were inoculated subcutaneously. In the early period following the inoculation the animals showed practically no changes except a slight swelling at the seat of inoculation. The general health seemed to be good and the appetite was normal. It was only at the end of the second or third month of life that the inoculated animals began to show a series of changes of an extremely characteristic nature. The animals became less lively, they emaciated, their hair became thin and rough, and marked deformities of the bones began to appear. These bone deformities affected particularly the spinal column and the extremities. The back became humped, the whole body was shortened, and the extremities became bowed. Post-mortem examination of these animals showed very marked changes in the spinal column, the thorax, and the extremities. The spinal column changes took the form of lordosis, skoliosis, and sometimes kyphosis. The thorax was flattened with prominent breast bone. The most marked changes were at the junction of the costal cartilages with the ribs. The femur was short and thick, with thickening of the extremities. The tibia and fibula were bowed, and there was also bowing of the long bones of the upper extremities. Microscopically the changes in young rats were much more marked at the epiphyses. To sum them up in a few words, it may be said that they were essentially the changes which are found in human rickets. The change in the shafts of the bones in the early stages consisted in the lack of ossification and bone formation, the place of the bone being taken by a cellular connective tissue.

The author concludes that in growing rats an infection with this particular diplococcus can produce disturbances in bone formation, both in the form of the substitution of cellular connective tissue for bone, and of bone changes similar to those in human rickets. These processes were associated with a want of lime deposition. Whether the changes are due to direct action of the bacteria, or are due to indirect action through the nervous system on the circulation, is impossible to say.

On the Alterations of the Blood Produced by the Bites of Venomous Serpents. (*Altérations du sang produites par les morsures des serpents venimeux.*)

B. Auche and L. Vaillant-Hovius. *Archives de Médecine Expérimentale et d Anatomie Pathologique, Tome XIV, No. 2, 1902.*

The writers claim that very little work has been done on the blood changes which are produced by the venom of serpents. They experimented with rabbits, allowing the animals to be bitten by snakes of the viper class, and after this examined the blood, both as to the quantitative and qualitative changes. They not only examined the blood under ordinary circumstances, but also in cases where the animal had been previously treated by anti-venine. In some instances instead of allowing the animal to be bitten by snakes they employed the crystalized snake poison. There were, however, no differences in action between the bite of the snake and the crystalized poison. The local lesions produced in all cases consisted of a more or less intense œdema, which was followed, if death did not take place rapidly, by the formation of a more or less extensive slough, which subsequently became separated.

The changes in the red blood cells under the action of the poison consisted in a more or less intense hæmolysis, which came on quite rapidly after the introduction of the venom. A reduction of over a million corpuscles for example could occur in a quarter of an hour. This reduction was in direct relation to the intensity of the poisoning. The reduction did not stop suddenly, but continued if the animal lived for as long as three days in some cases. It was accompanied by poikilocytosis. In case of recovery signs of regeneration appeared in the blood at the end of two or three days, and usually large numbers of nucleated reds were present during this time.

The changes in the white blood corpuscles were both qualitative and quantitative. In all instances there was an increase, sometimes very marked, of the leucocytes. It came on rapidly after the introduction of the poison. The leucocytes could increase four or five thousand in twenty miuntes. It obtained its maximum in from 8 to 48 hours, the maxima which occurred later usually being in the less violently poisoned cases. The leucocytosis persisted until death of the animal, except in cases which lasted a long time, when there was sometimes a diminution of the leucocytes for a short time before death. The qualitative changes in the leucocytes consisted in the increase in the number of polynuclears at the expense of the lymphocytes. There was no decrease in polynuclears preceding this. The number of eosinophiles was diminished.

In animals injected with anti-venine previous to the treatment with snake poison, similar changes in the blood were observed, but the changes in the leucocytes were much more marked. The leucocytosis was much higher, though the qualitative changes in leucocytes were essentially the same. A destruction of the red blood corpuscles also took place. At the same time, although these alterations were more marked, it is necessary to state that they were much more ephemeral, and that repair took place much more quickly.

As a control the writers tested the effect of anti-venine by itself, and found that it also produced a leucocytosis of a similar character, but no appreciable changes in the red corpuscles.

PÆDIATRICS

Edited by Henry L. K. Shaw, M. D.

The Infectiousness of Tuberculosis in Children and its Prevention. (*Bericht über Ansteckung und Vorbeugung der Kindertuberculose.*)

D'Espine. *Archiv für Kinderheilkunde, Band 31, Heft 1 und 2.*

The writer claims that tuberculosis is the most frequent cause of death in childhood and is very apt to exist in a latent form which is only recognized at the autopsy. There are practically no deaths from tuberculosis during the first three months of life. From the third month to the end of the first year they are not infrequent and become more so during the second year, but the maximum is reached between the third and fourth years. From a large number of autopsies the writer found that the latent form was most frequent from one to six years when the children are at home and cared for by their parents. From the latent tuberculosis acquired at this time an active form of the disease may develop later in life. Milk from tubercular cattle and sputa from phthisical patients form the chief modes of infection. The sputum is the worst enemy and is far more dangerous than the milk from diseased cattle. The author quotes a number of instances where infants contracted the disease from phthisical nurses who cared for them. The danger of infection from contaminated dust is real, for young children creep around the floor, gather up all the dirt, put all sorts of articles in their mouths, etc.

D'Espine claims that the bacilli may remain latent in the bronchi for years and become dislodged in the course of one of the acute infectious diseases, especially pertussis, so that a general tuberculosis will ensue.

He emphasizes the importance of educating the masses in regard to the infectiousness of tuberculosis and the means of preventing it.

A rigid inspection of dairy cattle must be insisted upon to avoid any danger from milk. He lays much stress on personal hygiene, cold baths and fresh air. The sanataria by the sea, in high altitudes and in the country are very valuable and are the means of saving many lives.

The Leucocytes in Digestive Diseases of Infants. (Die Leukocyten bei den Verdauungskrankheiten der Saüglinge.)

ALFRED JAPHA. *Jahrbuch für Kinderkrankheiten, Band 53, Heft 2.*

The author made a differential count of the white blood cells of twenty-two healthy infants and of thirty-one suffering from dyspepsia, marasmus, gastro-intestinal catarrh, follicular enteritis and cholera infantum and reached the following conclusions:

That the lymphocytosis in infants suffering from intestinal disorders described by some authors does not exist. In no form of intestinal disease were the lymphocytes increased more than in health. Normally there are more lymphocytes present in infants than in adults.

A differentiation of the various intestinal disorders through an examination of the leucocytes is not possible and there is no intestinal disease with a distinctive leucocyte ratio.

A polynuclear leucocytosis was observed under certain conditions. When this exists it is a sign of poisoning either from products of putrefaction or from toxins of pathogenic bacteria. It shows a severe infection but has no prognostic importance.

Treatment of Tubercular Peritonitis. (Traitement da la Peritonite Tuberculeuse.)

COMBY. *Archives de Médecine des Enfants, January, 1902.*

The treatment of tubercular peritonitis in young children has passed through many and diverse phases. Before the days of abdominal surgery this disorder was considered most grave and the treatment was purely medical. When the peritoneal cavity could be opened with impunity, owing to advance in antisepsis, this disease was handed over to the surgeon. On account of the slight risk of the operation and a considerable number of recoveries, operative interference met with general favor.

In this paper, however, the writer argues for a more conservative line of treatment. Thirteen cases reported by Caillé and treatment by operation are quoted in which there were seven recoveries.

In a series of twenty-two operated cases reported by Borchgrevink, there were only eight recoveries and fourteen deaths. In a series of cases treated medically there were eighteen recoveries and four deaths. In fifty-two non-operated cases of Rose there was complete recovery in one-third of the cases.

Good hygiene, plenty of fresh air and nourishing food are the essentials.

The writer concludes that the medical treatment of tubercular peritonitis gives better results than cases treated by laparotomy.

The Liberation of Volatile Sulphide from Milk on Heating.

RETTGER. *American Journal of Physiology, February, 1902.*

The heating of milk to destroy the more dangerous bacteria causes certain changes in the composition which have a detrimental effect. The formation of a film when milk is heated even at a temperature far below the boiling point involves a chemical as well as a physical process.

The author has worked especially on the changes in the proteids of the milk. He reviews the researches of Niemann, Oppenheimer and others on the liberation of sulphur and describes the technique and apparatus employed in the present investigation. The proteids are the source of the sulphur and the casein gives off more than the lactalbumin. The amount of sulphur given off is small, but is sufficient to be easily recognized by the blackening of lead acetate paper and the decolorization of dilute potassium permanganate solutions. The higher the temperature the more rapid is the liberation of sulphide. The lowest temperature at which the blackening of the lead paper occurs is 85° C. Alkalies facilitate this decomposition while acids retard it so that the amount of sulphide liberated depends largely on the reaction of the milk. Very little sulphide is liberated on heating condensed milk, even after the addition of small quantities of alkali. Skimmed milk, when fresh, gives off more sulphur than whole milk.

The liberation of volatile sulphide is conclusive evidence that the milk suffers a change in composition when heated. The author suggests that scurvy in infants, so often found where sterilized milk is employed, may be due in some way to alterations in the proteids.

A New Reaction of Human Milk. (Ueber eine neue Reaction der Menschenmilch.)

MORO and HAMBERGER. *Wiener klinische Wochenschrift, No. 5, 1902.*

Bordet showed that the blood serum of an animal which has received several subcutaneous injections of milk will precipitate the albumin bodies (Eiweisskoerper) of the kind of milk the animal received.

This led the writers to make a series of experiments with milk and hydrocele fluid. The following results were obtained. If a drop of human milk be added to a few cubic centimetres of the hydrocele fluid a characteristic reaction occurs in a few minutes. This consists of the coagulation of the fluid into a thick firm mass. If, however, a drop of cow's or asses's milk is added, no coagulation takes place. This reaction is entirely new and original and has nothing to do with that described by Bordet. Both fibrinogen and a fibrin ferment are necessary to produce this coagulation and the logical inference from these experiments is that a fibrin ferment exists in human milk which is not present in cows' milk.

To obtain this reaction it is necessary to use fluids which do not coagulate spontaneously. Transudates do not show this reaction, because they contain no fibrinogen. There may be some other ferment in the milk which assists in this reaction because when the milk was boiled the coagulation was less complete, took a longer time and sometimes utterly failed.

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OPERATIVE INTERFERENCE IN EPILEPSY.*

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The multiplicity of operations advocated at different times for the cure of epilepsy is one of the best evidences of the intractable nature of a disease which, though studied since the dawn of medicine, still baffles the best efforts of the medical profession. Considering the utter absence of scientific knowledge on this subject in the past and the uncertainty of such knowledge even now, it is not to be wondered that many radically different theories of etiology and treatment have been promulgated. There is no other disease, perhaps, for the relief of which so many operative procedures have been recommended. Some of these are only of historical interest, such as Marshall Hall's tracheotomy on the theory that the convulsion was due to carbonized blood, the result of asphyxia from closure of the glottis and Brown Sequard's cauterization of the glottis. Indeed, of the large number of procedures advocated in recent years, many are of mere historical interest already, and many more deserve to be.

The large number of operations advocated may be classified under three headings:

I. Those undertaken with the intention of removing sources of irritation in the brain.

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*Read at a meeting of the Allegany County Medical Society, held at Craig Colony, June 26, 1902.

II. Those done on the theory that the disease is caused by some abnormality of intra-cranial pressure or circulation.

III. Those promoted by a belief in the reflex origin of epilepsy. The various operations for the removal of traumatic or diseased conditions from the brain cortex belong in the first group. In the second class belong tapping and drainage of the cerebral ventricles, ligature of one or both vertebral arteries, of the vertebral artery and vein, and of the carotid.

The third class includes a great variety, such as cutting of eye muscles, removal of nasal and pharyngeal growths, division of the cervical sympathetic, removal of the superior cervical ganglion, stretching the pneumogastric, excision of cicatrices, circumcision, castration, hysterectomy, &c, &c.

Many of these procedures are no longer in use. Many more had little or nothing to recommend them and owed their prominence to the zeal of enthusiasts who refused to consider the subject from any except their own narrow point of view. This applies particularly to operations for the relief of reflex epilepsies. No one familiar with the subject doubts that innumerable absolutely useless operations have been done with the idea of curing epilepsy by removing some alleged source of irritation. There may have been some justification for such measures in the past, but the experience of the last few years has certainly demonstrated their uselessness as "cures" for epilepsy. Such operations, however, should not be condemned entirely. They have their uses in the treatment of epilepsy, even though they cannot be regarded as remedies for the disease.

While there is reason to believe that reflex epilepsy is exceedingly rare[1], yet all possible sources of reflex irritation should be sought for and remedied if found, not so much with the expectation of benefiting the epilepsy as with the intention of making the patient as comfortable as possible and improving the general condition. There is always a possibility, very slight, however, that in certain cases so treated the epilepsy will be benefited. Epileptics deserve the same consideration in this regard which is given to non-epileptic patients.

If an epileptic has any condition which would demand operation in a non-epileptic, such patient should have the benefit of the operation, though the procedure should not be undertaken with the expectation or intention of benefiting the epilepsy. If it happens that such operation benefits the epilepsy, we are fortunate;

if no benefit ensues, we should not be disappointed. When we consider that epilepsy is rarely due to any one cause, that it is a disease frequently appearing in individuals free from all sources of peripheral irritation, that even in the rare reflex cases the epileptic habit is soon formed and that the attacks may continue after the removal of the primary cause; that it is a disease, moreover, which may be benefited temporarily by *any* operative procedure, and finally, that operations followed by such temporary benefit have been hailed as remedies for the disease, and the results reported a few weeks or months after the operation, much too soon to justify any positive deductions as to the value of such measures, we cannot, to say the least, feel much enthusiasm for such attempts.

There are fewer operations done now for the "cure" of epilepsy than was the case only a few years ago. No matter what the operation, or what the theory, experience has proven that the results generally do not justify operating simply for the purpose of influencing epilepsy. When the patient has some other condition or disease which would in itself demand operation we are bound to do all possible to relieve the patient, and in such cases operative interference is demanded. There are, however, even now, some cases where it would seem advisable to operate primarily and principally for the relief of epilepsy. This point will be spoken of more in detail.

Following the principles enumerated above, the operative work at Craig Colony is considerable. It is not the intention of this paper to deal with the emergency side of the surgical work, which is of importance on account of the nature of the population, which predisposes patients to injury even when in the most favorable surrondings. The intention is rather to report the results of surgical work for the relief of epilepsy done at the Colony, or which, done elsewhere, has come under our observation.

There are two varieties of operation to be considered. The first is trephining. I am aware that this operation is not done on epileptics with the same frequency as formerly; that there is a strong prejudice against it on the part of many well qualified to judge, and that the results have not been satisfactory. Nevertheless, in many cases, operations of this nature are our only possible means of relief, and as such will continue to be used at times in certain cases. The experience of recent years has done much to fix the limitations of this operation. When cerebral localization was first proven, and Hughlings Jackson made his first observation on partial epilepsy, the operation was taken up with great enthusiasm and for some years very radical operations were advocated in any cases exhibiting symptoms of localized cerebral irritation. Time and experience have lessened our faith in such procedures. Thus, Starr[2], in 1893 reported 13 cases, 3 of which were cured, and in 1896[3], at the meeting of the American Neurological Association, in discussing the subject he says, "The cases reported as cured were reported too early." At that time he had had twenty-four patients operated on and in none of them had there been a cure.

Gowers[4], than whom there is no more authoritative writer on the subject, lays down the following rules among others: "Trephining can never be considered justifiable in any case of idiopathic epilepsy. Petit mal in a case of Jacksonian epilepsy contraindicates operation as it shows a state of brain instability. Not all traumatic cases are suitable for operation, as the lesion producing the epilepsy may be due to the general impairment of nutrition resulting from concussion of the brain. Without focal sign, traumatic causation does not justify operation. External signs of injury with tenderness over the motor area and Jacksonian epilepsy call strongly for operation." The experience of all who have done many such operations shows conclusively that the earlier the operation is done, the greater the chances of improvement or recovery. Much might be quoted from the writings of eminent neurologists and surgeons along these lines but the foregoing is perhaps sufficient.

There have been twenty-nine patients at the Colony trephined either before or after admission. Some of these cases have been included in other reports, but certain of them have never been included in any statistics on this subject. Twenty-four cases were operated on prior to admission and five after admission. Seventeen of the cases were due to traumatism to the head and twelve were due to other causes, non-traumatic. The average duration of the epilepsy previous to operation was five and a quarter years, the extremes being sixteen years in one case, and three days in another. The results in twenty-four cases, at least, are sufficiently well stated when we mention that they were sent to an epileptic colony subsequent to operation. However, to give the operation its due, it may be said that out of the twenty-nine cases, six were improved, nineteen were unimproved, two were in doubt, and two were worse after the operation. None were cured and though in certain cases the number of attacks were lessened, the patients continued to be epileptics, subject to all the dangers and incapacities of this class. In one case, when the operation was done one week after the first symptoms, the attacks were reduced from four a day to 20 a month. In another case operated on seven years after onset of epilepsy, there was an entire cessation of the attacks for five months, with a reduction in their frequency when they recurred

Of the five cases trephined at the Colony, two were done too recently to be mentioned here. The seizure records of the other three are given herewith.

Case 1. Operated April, 1900.

	1900	1901
January	559	1
February	136	3
March	131	3
April	205	1
May	14	2
June	0	0
July	3	2
August	0	4
September	0	7
October	0	7
November	0	1
December	3	0
	1051	31

Case 2. Operated April, 1900.

	1900	1901
January	3	4
February	1	2
March	7	1
April	13	3
May	1	3
June	11	2
July	1	3
August	1	1
September	6	6
October	1	8
November	5	3
December	4	4
	54	40

Case 3. Operated November 25, 1900.

	1900	1901
January	12	4
February	14	5
March	31	6
April	13	2
May	19	3
June	16	6
July	0	4
August	0	11
September	5	14
October	13	10
November	2	12
December	0	9
	125	86

It may be stated that these cases were all re-operations, having been operated on previous to admission, and again at the Colony. They were all kept on large doses of bromide after operation, particularly Case 1, and the improvement in this case is attributed as much to the bromide as to the operation.

These cases are not encouraging. If proof were needed to show the futility of late operations these figures would tend to furnish it. If proof were longer needed to show the uselessness of such operations in the majority of cases, these figures would contribute their share in that direction also. In only two of these cases was the operation done less than two years ago, while in the majority, eight or ten years have elapsed since operation. Consequently, it will be seen the patients have been under observation sufficiently long to justify conclusions as to the benefits derived from operative interference. Such cases suggest the necessity of early surgical attention in cases of traumatism to the skull. Is it not reasonable to conclude that if all cases were properly cared for at the time of injury, subsequent epileptic symptoms would be more rare? The results of operating after the onset of epilepsy in such cases are very gloomy and such being the case, every possible attempt should be made to avert the disease. When the disease is not thus averted however, it should be the attempt of the practitioner to give the patient the possible benefit of operation early. The earlier after the onset of epileptic symptoms such a procedure is carried out, the better the chances for the patient. Park[5] says on this subject, "Not once in five times am

I consulted about a case of epilepsy when there is any fair prospect of accomplishing what might have been accomplished had the case been surgically attacked earlier."

We can, of course, never make any such attempts at the Colony, as our patients are usually brought to us long after the onset of the epilepsy and so late that any slight chance of improvement by operation has passed. This accounts for the comparatively small number of such operations done here, and it is proper to state that our experience in this line is such as to make us hesitate greatly before undertaking any such operations in the future, even in the most promising cases[6].

Cases for operation cannot be selected with too great care. The patient's family and personal history should be thoroughly investigated and too much stress should not be laid on any one etiological factor. We should remember that this disease is seldom due to any one cause and consequently should not attempt or expect to accomplish much by removing a single possible cause when found. The case should be considered from both the medical and surgical standpoint, and to accomplish this a thorough examination should be made by a neurologist as well as a surgeon. Such examinations would prevent such absolutely unjustifiable operations as one which recently came to the writer's attention, where a patient with multiple sclerosis, whose epileptiform attacks were supposed by a surgeon to be evidences of focal epilepsy, had a good part of his left parietal bone removed in consequence of the mistaken diagnosis. The symptoms of multiple sclerosis were perfectly apparent in this case and would have suggested the impropriety of the operation to any one with even a rudimentary knowledge of nervous symptoms.

We should remember that too much stress has been laid on the partial character of the attacks; that we may have a partial epilepsy of non-traumatic origin without any gross lesion which can be reached by the knife. Regularity of onset should not influence us particularly, as such regularity occurs frequently in idiopathic epilepsy. The question of heredity should be given more consideration. There can be no doubt that in many cases where traumatism is the exciting cause, heredity is the predisposing. Evidences of such brain instability in the family should be carefully searched for before we decide on operation. The question of alcoholism is of interest in this connection. What are the chances of benefiting by operation an alcoholic suffering from epileptic symptoms after traumatism to head? When we consider that alcoholism is in itself a cause of epileptic symptoms and that in a case of the kind under consderation the alcohol and not the traumatism may be the main factor, we cannot but feel that operation may be of very little use, if it is not entirely contraindicated. Attention may be called in this connection to the necessity for the abstention from alcohol on the part of patients after such operations, or on the part of those who have received serious traumatism to the head without as yet any epileptic symptoms.

The second operation to which particular attention is directed is that of oophorectomy in certain cases. As to the justifiability of the operation, I am aware not much can be said, but when, as in our cases, everything else has been tried, when the patients are becoming worse mentally, morally and physically, especially when erotic tendencies are present which make it dangerous to allow them any liberty, when they are liable to become pregnant and reproduce their kind; especially when the attacks are worse and occur more frequently at the menstral epochs, and particularly when there is some ovarian disease which would justify operation in a non-epileptic patient, there certainly can be no harm in removing the ovaries.

Playfair[7], speaking of such operations in connection with insanity, says that the only class of cases in which such operations have any reasonable chances for success are hystero-epilepsy or other severe neuroses which are aggravated at the menstrual epochs. He also calls attention to the fact that it does not follow that because the attacks are worse at that time that they depend on menstruation, yet the hypothesis that an artificial menopause may benefit the patient is a reasonable one. Even in these cases he says the operation is not justifiable unless pathological conditions of the ovaries are present.

Kelly[8] says that the ovarian neuroses such as menstrual epilepsy and hystero-epilepsy do not in themselves justify the removal of the uterine appendages. Mitchell[9] has never seen a case cured by such operation and does not sanction it when the ovaries are sound.

The first case operated on at the Colony is an interesting one.

M. A. H., æt. 37. At age of 8 she had scarlatina and about the same time was injured over left temporal and parietal region by a runaway horse. Immediately after this injury, she had a convulsion. A few days afterward she was trephined. The convulsions recurred and continued at varying intervals until the age of 13. For the next 17 years she had no convulsions but frequent "fainting spells." For two years after age of 30 she had attacks usually three or four times a day and for nearly five years afterward was free from attacks. The attacks began again with increased severity, and in April, 1900, the uterus and appendages were removed by Dr. E. A. Sharp at the Colony.

At the age of 14 this patient began to have attacks of pain resembling that of dysmenorrhœa, once a month, but unaccompanied by any discharge. Her menstrual periods were always of this nature. Examination showed an impervious cervix and it was impossible to trace any continuation of the cervix higher up in the pelvis. At the operation the uterus was found to be a retention cyst holding eight ounces of fluid. Recovery from operation was uneventful. This operation had, apparently, a marked effect on the patient. During eight weeks preceding the operation she had 102 attacks. The attacks ceased at once after the operation. In two months she was in good health and for the succeeding twenty months, during which time she was under observation, she had no return of the attacks. In this case there was a source of irritation in the diseased sexual organs which fully justified the operation. When we consider that this patient remained free from convulsions, once for a period of seventeen years, and once for about five years without any remedial interference, we cannot but doubt the permanence of the improvement following the last operation.

Case II. A. B., æt. 22, single, U. S., student. Family history negative. Epilepsy of five years' duration. Said to have had frequent grand mal attacks prior to admission to Craig Colony. During her residence here she had no typical epileptic attacks. Her seizures resembled those of major hysteria and were of frequent occurrence. Laparotomy was done February 5, 1902. Both ovaries were diseased, adherent and cystic, the right particularly, and were removed. Recovery from operation was uneventful. Since then, patient's general health has been better and she has had no attacks of any description. It is early to report this case, but, to date, there has been a decided improvement.

Case III. D. S., admitted May 18, 1898, æt. 21, U. S., single. Father inebriate. Patient presumably a prostitute. Epilepsy of eight years' duration, with grand mal attacks occurring in series at menstrual epoch, accompanied by dysmenorrhœa. For six months prior to January 2, 1902, this patient had no attacks. She was frightened at that time and had a recurrence of attacks at next menstrual period. Gynecological examination showed sensitiveness and induration on left side of pelvis. Laparotomy February 26, 1902. Right ovary and tube adherent and removed. Left appendages could not be removed on account of mass of adhesions. Recovery was speedy. On account of the necessarily incomplete nature of the operation, no great change could be expected in this case, but since the operation her general health has been better and there is much less disturbance during menstruation. She has had two grand mal attacks since operation.

Case IV. T. A., admitted June 9, 1898, æt. 19. Alcoholism in family and epilepsy in collateral branches. Assigned cause of epilepsy, which was of eight years' duration, was diphtheria. Attacks were petit mal in character and occurred infrequently. This patient had markedly mischievous and dangerous tendencies; was erotic and had to be locked up constantly to keep her from undue intimacy with men. Oöphorectomy was done in this case, more for the possible moral effect than with any expectation of benefiting the epilepsy. She has been in good health since, but it is too early to judge of the result.

The cases mentioned in this paper are few in number, but fairly illustrative of certain types of cases in which operation is done for the relief of epilepsy. To one who has had any experience with this class of patients and who has looked up the literature on the subject, operating on such cases is not particularly inviting. Few patients are permanently cured of epilepsy by any form of operation. Even in cases operated on by the most expert surgeons, under the most favorable circumstances and after the most careful examination by neurologists, the disease usually returns after a varying time. There is no doubt that many of the so-called cures resulting from operation were reported too soon. It does not seem that any case should be reported as cured until three years have elapsed without attacks. Even after that time there may be a return. Cases are on record where patients had gone over three years free from convulsions after operations on the brain for relief of epilepsy, and at present we are justified, perhaps, in regarding such cases as recoveries. Though cases of this kind are rare, yet in so hopeless a disease, it would seem that in properly selected cases, the patient should be given even the slight chance of benefit which such operation may promise. The operation may, in a few cases, do good, in a very few it may cure the disease; but in the majority of cases there will be no improvement worthy of mention. Likewise, after operation for the relief of epilepsy, too much dependence should not be placed on the operation itself. The patient's general health should be carefully watched and his diet should be regulated. If it is found that bromides benefit him, he should certainly be kept on these drugs as well after as before operation. There is a possibility that the temporary improvement in some cases after operation might have been prolonged indefinitely if the patient had been kept on bromides. Such patients, as stated above, should abstain from alcohol, and if possible should engage in some form of out-door employment. Their habits should be regulated carefully and they should be kept as far as possible from indulging in any form of excess and from all forms of mental and physical overexertion. It is, of course, impossible to carry out such measures in all cases, but when they can be enforced, the patient's chances for permanent improvement are considerably increased.

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CYSTITIS.*

By CHARLES B. MALLERY, M. D.,

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The bladder being an ovoid muscular sack, partially covered externally by peritoneum, and lined internally by mucous membrane, which communicates with both the kidneys and the external air; its nerve supply being from the hypogastric plexus of the sympathetic and the fourth sacral; its office being to act as a receptacle of urine, which is an unstable excrement, it is naturally especially liable to inflammatory processes, which may be of trophic, irritant, or obstructive nature.

The various bacteria chargeable with causing this affection, in the order of their frequency, are the *bacilli coli communis,* the *proteus vulgaris* of Hauser, the *staphylococci, streptococci* and the tubercle bacilli, which enter the viscus either by way of the urine from the kidneys, through the urethra on instruments, directly from the blood current, from the rectum and sigmoid flexure, by way of lymphatic system, or by direct extension from some adjoining area of suppuration. But as it has been proved that normal urine is sterile, and that injec-

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tion of pure cultures of these bacteria into the bladder, does not cause cystitis unless a previous hyperæmia is present, and as this hyperæmia is caused by retention of urine, trauma, abnormal muscular action, abnormal condition of urine, surface chills, sexual excesses, lesions of the heart or central nervous system, perhaps the etiology of cystitis has not advanced much in the last decade, for these causes of hyperæmia were given as the causes of cystitis less than twenty years ago. However it is also proved, that hyperæmia alone cannot cause inflammation, bacteria which have the power of decomposing urea being also necessary.

The varieties of cystitis have received much attention, and seem limited in number only by the industry of the student, Halle, for instance, in 1895, making forty-three subdivisions. This is inevitable from the fact that cystitis is always secondary to some other disease of the genito-urinary tract, or of a specific inflammation, as typhoid or tuberculosis. The natural division into acute and chronic has this fault, the acute almost invariably persists and becomes chronic, and the chronic is especially liable to acute exacerbation. The membranous variety has been especially studied by Stein, and is most noticeable from the fact that forty-five out of fifty cases occurred in pregnant women.

Bozzini made his first urethroscope in 1807; Desormaux his cystoscope in 1853, and his idea elaborated by H. A. Kelley has made the female bladder nearly as accessible as the pharynx. Max Nitze, in 1876, introduced an electric light into the male bladder, and his instrument in the hands of an expert is invaluable for diagnosis. The use of the cystoscope has enabled Kelley to isolate and describe the diffuse, circumscribed and scattered forms of the disease, indicating that the whole surface of the bladder is not often involved in the inflammatory process and that the treatment should be applied only to the diseased spots.

The diagnosis depends on plain symptoms; these with examination of the urine and, in certain cases, exploration of the mucous surface with the sound and cystoscope, make its detection certain.

The symptoms are slight fever, not often reaching 102 Fahr., pain in the region of the bladder and glans penis, of varying degree of severity, accompanied by an urgent desire to urinate, the amount passed being very small and affording no relief from pain.

The urine in acute cases is usually diminished in quantity, bloody or smoky in color, strongly acid reaction, specific gravity high at first, later normal or slightly diminished, solids relatively increased, albumin present, it may reach one-fourth of one per cent.; sediment is abundant, consisting of normal blood cells, pus and squamous epithelium.

In chronic cases pain and tenesmus are very much less, the quantity of urine is moderately diminished, the color pale, or tinted with blood, the reaction is frequently alkaline (but may be acid in cases caused by the tubercle bacillus), the specific gravity runs from 1.012 to 1.020, the solids are both relatively and absolutely diminished, albumin is present, from the slightest possible trace to one-eighth of one per cent., sediment is always abundant, and if acid consists of pus, small round cells, squamous epithelium, and a little blood; if alkaline the sediment will settle in a thick viscid mass, composed of decomposed pus, amorphous and triple phosphates and ammonium urates.

Inspection in the female bladder is feasible to any physician who will provide himself with the necessary instruments and has sufficient cases, from which to form standards of comparison. In the male, more complicated instruments, complete anæsthesia and especial skill in manipulation are required, and then its use is not free from danger, especially in cases of enlarged prostate; but in favorable cases, Meyer says: "With the aid of Nitze's newest instrument, the operating cystoscope, we may look forward to being able to carry on intravesical treatment under the direct guidance of our eyes."

The treatment of the acute cases consists in rest in bed, with the hips elevated, with hot applications applied to the region of the bladder and perineum. The diet should consist of milk alone, and sufficient morphia should be given, preferably by way of the rectum, to control the tenesmus. To make the urine bland and unirritating, the natural mineral waters, with the saline diuretics, as the acetate or citrate of potassium are useful. Boric acid, benzoic acid, salol, urotropin, or cystogen are useful to render the urine aseptic.

For the cystitis caused by irritant drugs, as cantharides or turpentine, the mono-bromide of camphor is generally useful, or the injection of fifteen drops of a one per cent. solution of cocaine into the prostatic urethra will control the tenesmus, and this can be repeated in three hours if necessary. But with the best treatment only one in five of the acute cases are permanently cured.

The chronic cases are due to central nerve trouble, pyelitis, tumor of the bladder, calculi, enlarged prostate or stricture of the urethra. The spinal cases, if the other conditions warrant, will do best by establishing free, permanent, perineal drainage. Those due to pyelitis or inoperable tumor, demand the most carefully conducted local treatment. Those due to calculi or stricture will fully recover on removal of the cause.

Probably enlarged prostate causes more cases than all the other conditions combined. Most men of sixty years or over are suffering to some extent from this condition, which prevents complete emptying of the bladder, causing distention, hyperæmia, and, on the advent of bacteria from any source, decomposition of the residual urine, followed by dysuria and retention. For this we have been taught to give the patient a soft rubber catheter and teach him to use it. I have seen some most lamentable results from this, and in view of the elaborate experiments of Katzenstein, who concludes that, "(1) The disinfection of catheters with bichloride of mercury is most unsatisfactory. (2) The use of live steam for the disinfection of catheters is also unsatisfactory, because of the damage done to the catheters. (3) The disinfection of catheters with formaldehyde vapor as hitherto practiced is too slow, and for catheters of small caliber is incomplete. (4) The writer's apparatus enables one to render all sizes absolutely sterile in from *ten* to *twenty-five* minutes without injury to the catheters." The apparatus spoken of is designed to force a current of strong vapor of formaldehyde, at a temperature of seventy or eighty degrees F., through the catheter for about twenty minutes; if all this is necessary (and who has not seen these cases die from preventable infection?), the fallacy of self catheterization is apparent.

Local palliative treatment by the physician is much better for the patient. We must use and clean the catheter twice a day, and twice or three times a week, the bladder must be thoroughly washed out with some antiseptic solution, boric acid, permanganate of potassium, nitrate of silver, or, perhaps, the best for this purpose is protargol; if we are faithful with these details we may expect these patients to continue quite comfortable, for, perhaps, from four to six years, which is the average duration of catheter life.

Surgeons have tried tying the internal iliac arteries, and castramortality in cases where the brain is involved, makes this study tion, hoping for atrophy of the enlarged gland, but the results do not justify these measures; except, perhaps, that castration may be useful in cases of secondary suppurative orchitis, which is quite a common sequel of self catherization. Galvanism has failed; the electric cautery, or Bottini operation, was first done in 1875, and has been used quite extensively since then. The best statistics I can find give 82.7 per cent. cured, 5.8 per cent. died, and 11.5 per cent. failures. It is not applicable to all prostates, and its dangers are from secondary hæmorrhage and sepsis.

Prostatectomy remains to be considered. The operation is new, and each surgeon seems to think his own method of attack is the best. The suprapubic route was first tried, and is surely an improvement on all previous methods. The objections are: two bladder wounds in place of one, much more difficulty in securing drainage, usually much more hæmorrhage, and the manifest difficulty of working at the bottom of a deep dark cavity.

Perineal prostatectomy is now favored by Symes, Gouley, Wyeth, Ferguson, Deaver and Murphy, they agreeing that it is applicable to more cases, easier to perform, and gives a better result.

Murphy's technique is carefully detailed in the *Journal of the American Medical Association* of March 29, 1902, and after reading that I took a patient to him, and May 14th last saw him do his twelfth and thirteenth operations. All of this series have recovered, or practically so, have full control of the bladder and the residual urine, in my case amounting to eighteen ounces, has entirely disappeared.

This operation offers the long-sought relief from catheter life and its attendant evils, is thoroughly practical, and I predict will soon be as common as appendectomy.

TREATMENT OF CEREBRAL RHEUMATISM BY COLD BATHS

By Dr. M. SHELLENBERG
Philadelphia, Pa.

As a rule cerebral rheumatism has attracted very little attention among writers of recent text books. This is a subject which is of the utmost importance, for while cerebral rheumatisms are fortunately, somewhat rare, at the same time the high degree of doubly important. The common causes of death in rheumatic fever are pericarditis and pneumonia, and also, frequently, death is due to the high fever which has a directly depressing effect in itself. The endocarditis, which is so common a complication, is not in itself serious in the sense that it produces immediate death, but it generally results in permanent lesions of the heart and death eventually follows, whereas, in pericarditis the immediate death rate is more conspicuous.

It does not seem that the hyperpyrexia is as marked as it used to be, possibly due to the effect of the introduction of the salts of salicylic acid in the treatment of this condition.

There are four symptoms which may be grouped under the head of cerebral complications; these are, (*a*) delirium, (*b*) convulsions, (*c*) coma and (*d*) chorea. The delirium is commonly found in connection with extremely high fever, but not necessarily so. Sometimes this delirium is very noisy in its nature, at other times it approaches more nearly stupor or coma. Osler believes that the delirium may be excited by the administration of the salicylate of soda, commonly appearing a week or ten days after it is first administered.

There have been a number of cases of convulsions reported following rheumatic fever, but they are not common, while coma, which is more serious than all, may develop without the appearance of delirium or convulsions, or it may result from them. Undoubtedly, many cases appear without high fever and are uremic in character, being frequently associated with marked renal changes. Coma may appear not only during an attack of rheumatic fever, but also after the appearance of convalescence.

The relation between chorea and rheumatic fever has been extensively studied by different writers. Osler states that in 554 cases which he analyzed from the Infirmary for Nervous Diseases in Philadelphia, in only 88 cases did he find the association of chorea and rheumatism. He believes that it is more apt to appear in the mild attacks of rheumatic fever occurring in children. Trousseau, in his lectures upon cerebral rheumatism, has found that the association of pericarditis is not necessary for the production of cerebral symptoms. He reports cases in which the disease became rapidly fatal following an outburst of violent delirium, in which he could find involvement of neither the pericardium nor any other internal organ. He believes that the delirium has nothing peculiar about it, but resembles that which occurs in other diseases, such as typhoid fever, with the exception that it is in the habit of terminating fatally. It lasts only one, two or three days, and is succeeded by stupor, although he acknowledges there are cases on record in which the disease seems to become chronic, the delirium running a slow course.

Watson, on the other hand, has been a firm advocate of the fact that pericarditis is generally found in connection with cerebral disturbances in rheumatic fever. He states that he believes that the symptoms of the cerebral involvement are simply distributed through sympathy with the cardiac disorder.

Insomnia and restlessness and other nervous symptoms are not especially common in acute rheumatic fever, except in neurotic people in whom any febrile disturbance seems to upset the delicate equilibrium noticed in the cerebral functions.

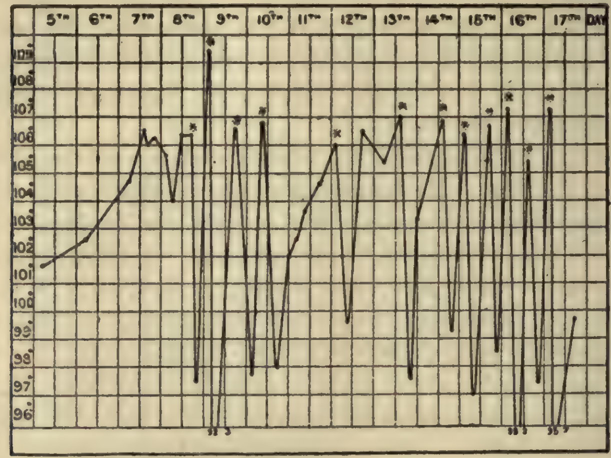
It has been noticed that the cerebral symptoms are more common in cases of hyperpyrexia, either accompanying or preceding the rise in temperature. On this account it is a wise precaution for the physician to take the temperature frequently so that he can not be taken unawares.

According to Coupland, the most common nervous symptom present is delirium. He found this condition in 57 out of 65 cases of hyperpyrexial rheumatism. He noticed also deafness, drowsiness, giddiness, headache, insomnia and vomiting, and even changes in the habitual manner of the patient, such as unusual garrulity, or taciturnity, unwonted cheerfulness or fearfulness and other departures from the normal mental state. He brings out the point that there is a connection between these abnormal states and the development of hyperpyrexia in that they generally precede the latter by a few hours and must be recognized as early as possible. Of course, we must remember that these symptoms are not invariably present in hyperpyrexia, while, on the other hand, we may have the nervous symptoms without the hyperpyrexia, but in the majority of cases of this kind we must look for a combination of the two.

According to Coupland, who has had considerable experience in cases of this kind, the use of antipyretics is valueless. He believes the only effectual method of treating cases of this kind is by the application of cold to the surface of the body, by the use of ice bags, ice packing, sponging, or by immersion in a bath, the temperature of which is about 90° F., reducing it to about 80° F. After ten or fifteen minutes, immersion in such a bath there will be an appreciable reduction in temperature which will continue for some one-half hour or so. As soon as the temperature reaches 104°, or 105°, again, this procedure should be repeated.

Coupland has presented a number of temperature charts which show this effect of the bath upon rheumatic hyperpyrexia. As in typhoid fever, the result of this method of treatment is not simply a reduction of bodily temperature, but also the abatement of the nervous symptoms, so that the patient who possibly has not slept for days, even under the influence of hypnotics, is able to sleep again.

The application of cold to the widely extended area of the nervous system produces an excellent impression upon the central nervous system, especially upon that center which controls the heat production; therefore, Coupland believes that hyperpyrexia is simply one of the nervous manifestations of cerebral rheumatism.



There has been considerable speculation owing to the fact that the disappearance of pain in the joints has frequently preceded the appearance of hyperpyrexia and that in some way or other there is a metastasis of the rheumatic poison to the brain. As yet, this doctrine is pure speculation and is not supported by the autopsies made in these cases, for as a rule, there are no evidences of cerebral or meningeal inflammation.

In this connection it is well to report in detail the following case. The patient, a man 40 years of age, came under observation during the winter months. He had no especial history, either family or personal. He reported that a week before he had felt so ill that he could not move around easily. His joints were painful and beginning to swell. He had some chills which were followed by profuse sweat. On examination I found that he had a temperature of 104° with rapid pulse and respiration. There was some swelling of the joints and his lips were red and dry. With this he had some bronchial rales. On examination of his heart I found that the impulse was displaced a little downward and outward and the heart was acting strongly. I could find no murmur, while the chest was of good shape and excellent movement. I found a number of subcrepitant rales at the base of each lung, while the rest of his condition was normal. There was no sign of any cardiac involvement, but possibly there was some pneumonic congestion in the lower lobes of each lung. As his temperature remained about the same he was carefully watched and it was noticed that the patient rapidly developed delirium while the temperature ran up to 104½°. He developed now a pericardial friction loud and clear, but there was no change in the auscultatory sounds of the lungs. This delirium came on very suddenly, the patient insisting on getting out of bed. The delirium was transitory in its nature and disappeared in the course of a few hours as the temperature fell a couple of degrees. Having determined upon our line of action he had an ice bag applied to his head when his temperature ran up to about 104°. As it was found that his temperature did not decrease, directions were given to have the body sponged, but orders were also added that if this failed to reduce the temperature, the baths should be resorted to. The sponging had the effect of reducing the temperature about 1½°, so that this was not done, but his condition remained about the same, and the next day, as his temperature was 104° the baths were ordered with the result that the temperature dropped and the delirium disappeared. The patient eventually recovered.

There has been some objection to the use of the bath on the ground that the other conditions would not permit of such a therapeutic measure, but we must remember that in hyperpyrexia and cerebral complications there is a high degree of mortality, and it is possible that by resorting to the bath the fatal issue may be avoided.

Clinical and Pathological Notes

A Report of Four Cases of Arterial Embolism of the Extremities. By George H. Fish, M. D.

Two of the following cases occurred in my own practice. Of the other two, one received no medical attention from five days after her confinement until she was admitted to the Saratoga hospital, twelve weeks later, with her foot in a sloughing condition; the other is a case of Dr. Thompson's; all were seen in consultation by Dr. D. C. Moriarta, and in these cases amputation was done; the case first reported was also seen by Dr. S. B. Ward.

Case I. C. F., aet. 56, male, merchant, of good and sedentery habits, was attacked with appendicitis February 8; as the symptoms did not ameliorate, an appendectomy was deemed advisable and done February 11. The appendix was in a gangrenous condition, but unruptured though distended with pus. There were no blood vessels tied at the time of the operation. The patient's convalescence was quite satisfactory, primary union occurring, and he had no disagreeable symptoms until the morning of the 19th day, when about three o'clock I was hurriedly summoned, and found him in a state of complete collapse, all the extremities cold, eyes fixed, color ashen gray, and no pulse in either wrist. The history I obtained from the nurse, was, that she had just removed the bed-pan, when, returning from the bath-room, she found patient unconscious. She had succeeded in forcing a little whiskey down his throat before I arrived.

I believed the patient to be suffering from a cerebral embolus, as there was paresis of the extremities of the right side, and the condition of his arteries did not favor the diagnosis of hæmorrhage. He was given immediately one-fifteenth of a grain strychnia hypodermically and, as he apparently did not respond at all to this, I injected one-fiftieth grain glonoin, repeating it in fifteen minutes, using at the same time other stimulating measures, such as heat, friction, elevation of the foot of the bed and plenty of fresh air. There was an almost immediate response to the glonoin, and when Dr. J. B. Ledlie arrived, about an hour after, the patient was conscious, and there was a distinct pulsation in the left radial, although too fast to be counted, while there was absolutely none at the right wrist. Gradually the patient recovered his speech, although there was some aphasia, and when able to swallow he was given some whiskey by mouth. At the end of the first hour from the onset of the attack the pulse was still too rapid to count, and entirely absent in the right wrist, the right forearm being perceptibly colder than the left. The paralysis had cleared up considerably. In the meantime Dr. Moriarta had arrived, and all agreed that the condition resulted from multiple emboli. After some discussion it was decided to use transfusion, the dose of nitroglycerine being increased from one-fiftieth to one-twenty-fifth of a grain every fifteen minutes. In another hour the patient's pulse could be counted at 170, speech for single words was intelligible, and there was improved use of right arm and leg. From this time on his condition steadily improved, some aphasia being present for twenty-four hours, the paralysis gradually clearing up, although no pulse could be felt in the right side until thirty-six hours after the plugging of the artery; then, feeble at first, gradually becoming fuller as the embolus in the brachial was absorbed.

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* Read before the Medical Society of Saratoga Springs, May 16, 1902.

On the third day, symptoms of infarction of the lung appeared, which, however, cleared up in four or five days. During the patient's illness his heart was carefully examined a number of times by us all, but with negative results, while repeated uranalysis failed to show any albumen or casts.

This case has seemed of especial interest as the emboli were undoubtedly the fragment of a heart clot broken into several pieces, at the time of its dislodgment by the blood stream; one fragment lodging in the left middle cerebral, probably at its bifurcation, causing coma, motor aphasia and paresis of right arm and leg; another fragment lodging at the bifurcation of the right brachial, its location being determined by the absence of any pulsation in either right radial or ulnar, while pulsation of the right axillary could be plainly felt; and still another fragment causing an infarction of the lung.

Case 2. G. C., æt. 39, male, markedly plethoric, a man who had for years indulged to excess in both food and drink, naturally robust. Seven years ago fell, sustaining a fracture of the left fibula, which resulted in good union, although followed by a severe neuritis. During the past ten years the patient has taken little or no physical exercise. He had also suffered from a varicose ulcer on the left leg at intervals for about the same period.

February 23, first confined to house by an acute attack of gastritis, he had also some uræmic symptoms, and an uranalysis showed in addition to albumen, both hyaline and granular casts and some tubular epithelia. Physical examination revealed some atheroma, a cirrhotic liver and fatty heart, although no valvular murmur could be discovered.

Ten days after the onset of this illness he complained of a sharp pain in the great toe of the left foot, which on examination was found slightly discolored and swollen. The foot was wrapped in cotton and heat applied, and five grains of ammonium carbonate were administered internally, in capsule every four hours, and, on account of the patient's condition of extreme restlessness, this was combined with three grains of sulfonal. He was at this time secreting from twelve to twenty-four ounces of urine in twenty-four hours, and unable to lie down on account of dyspnœa. Although several diuretic drugs were used at different times, and the patient kept strictly on a milk diet, the kidneys responded but slightly. As the discoloration in the great toe extended to the foot and second toe, and there was evidently a condition of gangrene present, I asked Dr. Moriarta to see the case with me, which he did March 7. At this time the foot was cold nearly to the ankle joint, exquisitely sensitive, painful and œdematous. The doctor agreed that gangrene was present, but, on account of the patient's very bad general condition, gave a very unfavorable prognosis, and advised delay in operative procedure until patient's general condition improved or sloughing of the gangrenous foot should make it imperative.

About March 15, the patient's kidneys began to act more freely and his general condition to improve; in the meantime a line of demarcation had formed at about Chopart's line for amputation. On March 23, the foot began to slough, and Dr Moriarta again saw the case with me, at which time he advised a formalin pack to combat the gangrenous odor. This pack gave the patient the greatest relief from pain.

As we were anxious to have Dr. Bennett, of New York, administer the anæsthetic, and as the patient's condition was not apparently being injured by any absorption from the diseased member, operation was delayed until March 26, when the leg was amputated at the middle third of the thigh. Here we found the femoral completely thrombosed. Although the patient took the anæsthetic, chloroform, very badly, he rallied from it quite well, having been given one-fifteenth grain of strychnia during anæsthesia, requiring no stimulation after the operation excepting the nitroglycerine, which was continued on account of the condition of his arteries. He passed a fairly comfortable night, appearing rational the following morning, continued comfortable until about two in the afternoon, when the heart began to fail, and in spite of stimulating measures he finally became unconscious. and died about seven o'clock.

CASE 3. B. B., æt. 30, housewife, has borne four children, the last twins, from the birth of which dates her present trouble. She had no medical care from one week after her confinement until she entered the Saratoga hospital, twelve weeks later. Patient stated that she had milk leg in the right side following her confinement, that she painted the leg with iodine and it became better, after which the left leg began to trouble her, which it has done ever since, although she has been about on her feet until two weeks before admission, at which time present trouble began growing steadily worse. At the time of admission, the left foot was gangrenous and nearly disarticulated at the ankle joint. The line of demarcation seemed to have formed at the lower third of the leg. The patient complains of considerable pain, nausea, anorexia and loss of sleep. Uranalysis negative.

The day after admission the left leg was amputated at the lower third of the femur, hæmorrhage being controlled with difficulty, on account of collateral circulation. The tissues were œdematous. The patient took the anæsthetic (ether) very badly, requiring vigorous stimulation, but reacted well and primary union was secured, the patient being discharged well in a month's time.

CASE 5. G. C., æt. 74, housewife, has always been in good health up to about two years ago, when she fell, striking on her head. She suffered three or four couvulsions, and heriplegia of the right side followed, which has gradually cleared up.

Physical examination shows some atheroma. Examination of the heart reveals accentuation of the second sound, otherwise negative. Uranalysis negative.

Patient's trouble began last winter, when she says she suffered from rheumatism in both feet; this was getting better, when, about February 1, she was attacked by severe pain in the great toe of the left foot, which has persisted ever since. A few days later discoloration commenced in the toe, accompanied by some swelling and tenderness. The discoloration extended into other toes, and gangrene was present about April 1, patient suffering severe pain almost continually. About the middle of April, Dr. Moriarta saw the case in consultation, prognosed amputation, and advised a formalin pack which gave the patient great relief from pain. The line of demarcation formed first above the tarsometatarsal articulation, the great, second and third toes being gangrenous. Amputation (Chopart's) was done May 9, and since then the patient has been more comfortable.

DISCUSSION

Dr. D. C. **Moriarta**: The subject of embolism of the arteries of the extremities is not only a most interesting one, but rather unusual as well. I have only seen these four cases in a practice of seventeen years.

In reviewing the literature, I have been surprised to see how little our text-books have to say on the subject. Welch, in Allbutt's *System of Medicine* and DaCosta on *Diagnosis* are the only ones which would be of much value to the student or practitioner. The most complete information I have is in a monograph nearly thirty years old, and the author, Dr. S. B. Ward, of Albany, is with us to-night and will discuss these papers. The fact that nothing new of moment has since been added shows how well and completely the article was written. I regret not having reviewed the subject as completely or as carefully as it deserves.

The four cases presented by Dr. Fish are most interesting, particularly from an etiological standpoint. Two of the cases, the one following confinement and the other occurring in an elderly person with some atheroma of the arteries, we can comprehend from a pathological standpoint. Of the others, one finds it hard, if not familiar with the class of cases, to determine the origin. Particularly is this so in the case of C. F., which is an exemplification of the thought expressed in Dr. Ward's monograph where the lowered vitality and condition of the blood must be etiological factors.

While authorities state that the left side of the heart, where there has been a previous endocarditis, or vegetation on the valves, is the principal cause of embolism in the systemic circulation, yet in none of these cases did such a pathological condition exist, that we could diagnose. We satisfied ourselves of this in all the cases other than the one Mrs. B. B., following confinement; and of that we have no accurate history, though the patient made a recovery. In another case, that of Mrs. G. C., a doubtful history of rheumatism was given. This patient had an accentuated second sound of the heart, otherwise there were no abnormal sounds.

Concerning the effect of habits as a cause of this condition, in only one of the four cases, that of G. L. C., could these possibly have been a factor. The pathology of the case of Mrs. G. C. was no doubt due to endarteritis, as the traumatism in her history was too remote; while with Mrs. B. B. we can readily appreciate that it came from the accepted theory of a septic condition following child birth, or from the thrombus in the other member previously affected. In the case of C. F. it must have been the lowered vitality, a clot forming in the heart, perhaps behind one of the valves or about the chordæ tendineæ, while in the case of G. L. C., we can assume it to have been caused by an endarteritis, resulting from the use of alcohol, or his habits.

Three of these cases are living,* so we are not in a position to make any post mortem observations; while in the case of G. L. C. we were not permitted an autopsy, although we made an examination of the amputated member.

The diagnosis of this condition is not difficult. The first manifestation in three of these cases of which we have a history was pain in the member, of sudden onset, very intense and paroxysmal in character. Authorities speak of it sometimes as being only an itching, numbness or formication. There is more or less loss of motion, in addition to sensation, in the parts. In the cases of G. L. C. and Mrs. G. C., the pain was just at the line of demarcation and distal, and it was excruciating on pressure. When we have these symptoms, associated with œdema, local anæmia, lowered temperature and absence of arterial pulsation, we have a group of symptoms which are characteristic of embolism. These manifestations are followed in a few days by discoloration of the member, if the circulation is not restored, as was the case in three of these patients, which goes on to necrosis and amputation. If circulation is restored, either by the collaterals or by the clot disintegrating or being dissolved, the pain and anæmia cease, the temperature becomes normal, and sensation and motion are restored.

In some of these cases the early manifestations are so slight that the patient and friends are deluded and do not believe that the prognosis is as serious as given. Unfortunately, however, the majority of cases do not warrant their conclusion, as the case usually goes on to amputation.

I would call your attention to another symptom which Dr. Ward will elaborate in his discussion, *i. e.,* the intense nervous shock, which was characterized in three of the cases, but particularly in that of C. F.

When and where amputation should be done are most important considerations. Such authorities as I have found believe that we are justified in waiting until the line of demarcation occurs. And if I were to have you profit by my experience as to where to operate, I should have to tell you, very much higher than you would naturally conclude was essential. If possible I would advise you to reach tissue in which you can feel the arteries supplying the part pulsate.

In the case of Mrs. B. B. we were fortunate in getting into the healthy tissue which was abundantly supplied with blood. In the cases of Mrs. G. C. and G. L. C., we were not so fortunate; and they emphasize the statement of Dr. Ward in his monograph already referred to where he says "The line of demarcation is rarely situated at the level of the embolus, but usually much lower down." I call your attention to this, for while I was familiar with these suggestions I did not profit by them. In the case of G. L. C. the line of demarcation was below the ankle joint; we amputated at the middle third of the thigh but did not get above the occluding thrombus; and though the artery was beating in Hunter's canal, there was little or no collateral circulation at the site of amputation. I might add that if œdema is present, collateral circulation is not established, or only partially.

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* Patient has since died.

In the case of Mrs. G. C., the line of demarcation was about at the distal third of the foot. We did a Chopart's operation. In this case at an examination with Dr. Thompson the day previous, when the point of amputation was determined, we were both sure we could feel the posterior tibials. But when amputation was done we found the vessels occluded and little or no collateral circulation established. Whether a second amputation will have to be done later I do not know; but I assure you I wish the amputation had been done higher.

The question naturally arises, if an embolus occurs in the conditions in which these patients are in, what are the probabilities of an embolus occurring in another portion of the body, producing the same condition. The outcome is doubtful and the prognosis would always be guarded. Dr. Ward states that he was able to find but one recovery in thirty cases.

The treatment is certainly an expectant one. The member should be kept warm and at rest, though in two cases, G. L. C. and Mrs. G. C., where necrosis occurred, the attempt to keep the member warm produced the most intense agony, and it was absolutely impossible to continue the treatment with cotton batting and warmth for any extended interval. In the case of G. L. C. the odor was very marked and disagreeable. To overcome this, I suggested to Dr. Fish that he do the foot up in a formaline pack, one to one thousand, which he had done, resulting in the patient's having the first comfort he had had since the attack commenced. So that in formaldehyde we not only had a deodorant, but a local anodyne. And when I saw Mrs. G. C. with Dr. Thompson, the patient was suffering the most excruciating pain which required frequent doses of morphia; I suggested the formaldehyde pack and the result was the same as in the case of G. L. C. So perhaps in formaldehyde we have a local anodyne of value for these cases.

It has been suggested that carbonate of ammonium is of service in preventing the formation of secondary emboli. I believe the most essential indication is to keep the tension from the arteries with nitroglycerine and regulate the heart's action with stimulants as required; locally to keep the parts warm, and if they are painful, I would certainly apply a formaldehyde pack.

Dr. Samuel B. Ward: There is really not very much to add to what has already been said on this subject. The histories of the cases are very complete and satisfactory, and Dr. Moriarta has said pretty much all that I know on the subject.

Perhaps it might be well to emphasize the fact that the shock accompanying this accident is usually very severe. The pulse is apt to be rapid, feeble and fluttering, the countenance pale and anxious, and the patient much in the condition of one who has received a sudden injury to the peritoneum. It may be carried to the point of unconsciousness.

The diagnosis is usually easy. Three of the symptoms have reference to the nervous system: first, an unusual sensation of the limb, sometimes described as an itching, prickling, formication or numbness, but usually amounting to pain so acute as to be the prominent symptom; the second is paralysis of the limb, more or less complete below the point of occlusion, and the third is decrease or abolition of sensation. The three other symptoms are purely mechanical: pallor, coldness and absence of arterial pulsation below the affected point. This group of phenomena belongs to embolism and nothing else. Occasionally in addition to these we have nausea, vomiting and muscular twitchings.

The subsequent history of the case depends upon whether the embolus is disintegrater and carried along into smaller vessels, lodging at points about which the collateral circulation is very perfect, and perhaps sometimes in part at least redissolved. In that event the coldness and paleness disappear, giving place to the normal color and warmth, and restoration to health is rapid and certain.

In the other event, of the embolus remaining where it lodged and completely cutting off the circulation of the limb below that point, the history is that of gangrene. The line of demarcation is usually situated at a point considerably below the embolus itself, and I have seen one case in which with gangrene of one foot the occlusion, by secondary arterial thrombosis involved the lower portion of the abdominal aorta itself.

As to prognosis and treatment, pretty much everything appears to depend upon the integrity of the heart. If that muscle is in good condition, and the valves are competent, amputation may result in recovery; but if the heart itself is unsound, operation rather hastens the fatal result.

The constitutional measures to be resorted to are already sufficiently indicated by the two gentlemen who have preceded me.

Editorial

> It is said that the word oftenest on a Frenchman's lips is: How few surgeons can communicate in simple, intelligible language to a jury, in a law case, the results of a *post-mortem* examination! Almost invariably the learned witness finds a wound "in the parietes of the abdomen, opening the peritoneal cavity;" or an injury of some "vertebra in the dorsal or lumbar region"; or something else equally frightful. Some years ago in one of the English courts, a judge rebuked a witness of this kind by saying, "You mean so and so, do you not?" at the same time translating his scientific barbarisms into a few words of simple English. "I do, my Lord." "Then why can't you *say* so?" He *had* said so, but in a foreign tongue.
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> *Words; Their Use and Abuse.* WILLIAM MATHEWS.

Rudolf Virchow's Accident and Sickness

Because most of the reports relative to the sickness and death of Virchow have been more or less unauthentic, Körte has given a brief sketch of the main features of the case in the *Berliner klinische Wochenschrift* for October 27, 1902.

On January 4, 1902, while in fairly good health, in alighting from an electric car, Virchow was thrown to the ground by the premature starting of the car and struck heavily on the asphalt pavement, the injury being received on the left hip. He was taken home in a carriage and placed in bed and Dr. Körte summoned. Dr. Körte found a typical intertrochanteric fracture of the left femur with almost three centimeters of shortening. For the first two days after the accident the leg was supported upon pillows and then extension with an eight-pound weight was applied, and the patient gradually raised to a sitting posture. Virchow preserved the most marked stoicism and did not complain at all of his discomfort or misfortune. He seemed especially grateful for any relief afforded him. He never enquired into the nature of the break, but simply remarked that he felt quite assured that his bones would unite. Three weeks after the accident well-marked callous could be detected, and at this time he was allowed to sit up in a chair for a short time each day. Four weeks after the accident extension was removed, and massage and active and passive motions instituted. Six weeks after the accident the patient began to walk with crutches, and union appeared to be fairly firm.

From the beginning of his illness Virchow had at times shown some mental disturbance, and was especially anxious to be back at his work. He was constantly enquiring when he could resume his lectures. On Sunday, March 23, the injury having been received on January 4th, he went out for the first time and visited the Charité, after which a radiograph was taken of the pelvis by Dr. Grunmach. Because of the fact that Virchow's apartments were up two flights of stairs it was rather difficult for him to get in and out of doors. On May 1st he went to Teplitz and took the baths there for six weeks, at the end of which time he became restless and discontented, and left for Harzburg, where for a time he was fairly contented and comfortable, and was able to take short walks. On July 6th, symptoms of heart weakness began, which gradually increased in severity; the pulse was irregular but there were no murmurs. The slightest movement, even talking, caused shortness of breath. He failed gradually, and on August 30th was taken back to Berlin, where he died on September 6th in an attack of heart failure. No autopsy was held, but the diagnosis was myocarditis with coronary artery disease, and possibly slight inflammation of the kidneys, resulting from a catarrh of the bladder. The article contains an excellent radiograph of the pelvis which shows the healed fracture.

The Medical Aspects of the Twelfth Census of the United States

Amongst the mass of material collected by the officials of the 12th United States Census there is much of interest to physicians. Most of this is contained in the volumes which cover the subject of Vital Statistics. In these columns the subject of birth rate and various causes of death are considered statistically, and are illustrated by numerous excellent maps and tables. It would be impossible in a short space of time to give an idea of the amount of valuable material which is contained in these chapters. Two or three things, however, are rather striking.

In connection with the causes of death in general the increase in deaths from pneumonia, heart disease, cancer, kidney diseases, and certain diseases of the nervous system, and the very marked decrease in the proportion of deaths from diphtheria is of interest. The maps showing the distribution of the various diseases are extremely interesting, especially that illustrating the distribution of cancer in the United States. The greater proportion of the states south of latitude 37 are practically free from the disease, with the exception of that portion of California which lies south of this latitude. Above this latitude the middle west is relatively exempt. On the other hand there are certain areas in which a marked concentration of the disease appears to occur. A strip of the Pacific coast, embracing the whole of California and the western two-thirds of Washington and Oregon shows a death rate of over forty per one thousand, and practically the same death rate is found in Iowa, Southern Minnesota, Southern Wisconsin, Michigan, the northern part of Ohio, New York, Vermont, New Hampshire and Maine.

A map covering the same ground in a more restricted district, namely New York and the New England states, shows that in these areas the distribution of deaths from this disease is extremely uneven. In certain places the disease seems to be almost unknown. In this state the counties of Wyoming, Lewis and Franklin, and a small area about the city of Schenectady, show almost no death rate from cancer, whereas the counties of Herkimer, Hamilton, Schoharie, Chenango, Cortland, Seneca, Schuyler, Tompkins and Livingston show a death rate of over ninety per one hundred thousand inhabitants

It is difficult to explain these distributions, and in fact with our present knowledge they cannot be explained. It hardly seems to us that a parasitic theory aids us materially.

Many other interesting facts are brought out in these volumes which are well worth perusal by all physicians.

In Memoriam

THEODORE FRELINGHUYSEN CORNELL VAN ALLEN, M. D.

Dr. Theodore F. C. Van Allen died at his home in Albany, October 28, 1902, after a protracted illness from pulmonary tuberculosis. He was born in Delmar, Albany county, January 16, 1861, the son of the well-known physician, Dr. John Van Allen, and was a direct descendant of Col. Frederick Frelinghuysen of the New Jersey Minute Men of 1776.

Dr. Van Allen attended the Albany High School and received his medical diploma from the Albany Medical College in 1883. After graduation he did post-graduate work, devoting his attention to the diseases of the eye and ear, and later practiced in Albany as a specialist on those branches. His ability was at once recognized and he was in a short time appointed ophthalmic and aural surgeon at St. Peter's Hospital, and later an instructor, and afterwards a clinical professor in the Albany Medical College.

Although handicapped almost from the very outset of his medical career by a physical condition which would have unnerved a less brave man, he courageously and uncomplainingly fought the inevitable. Dr. Van Allen possessed the characteristics of a true man—love of truth, a desire always to do right to others and unswerving honesty. No matter how much he might personally be affected truth never was displaced by sham, nor frankness by selfish professional diplomacy. Pretense and assumed knowledge were not a part of his armamentarium, but ever true modesty and conscientious self-doubt were in evidence. At times apparently brusque and unsympathetic, he was ever generous to a fault and loyal beyond measure. With a deep realization of responsibility, he did thoroughly whatever duties, no matter how small, he was asked to undertake.

He was a member of the Medical Society of the State of New York and of the Albany County Medical Society, and had been

THEODORE F. C. VAN ALLEN, M. D.

honored in the latter by election as treasurer and president. He had also served faithfully for many years as treasurer of the Alumni Association of the Albany Medical College. He was an incorporator of the South End Dispensary, a member of Masters lodge F. and A. M. and of Capital City chapter Royal Arch Masons, and one of the managers of the Albany Press Club..

He is survived by an aged mother, Charlotte Mercer Frelinghuysen Cornell Van Allen, upon whom the wealth of his love was lavished and whose well being was his constant thought.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, OCTOBER, 1902

Deaths

	1901	1902		1901	1902
Consumption	16	26	Apoplexy	11	10
Typhoid Fever	0	4	Bright's Disease	8	11
Scarlet Fever	0	0	Cancer	8	8
Diphtheria and Croup	6	4	Accidents and Violence	13	7
Whooping-cough	0	2	Seventy years and over	20	16
Pneumonia	8	9	One year and under	17	11
Broncho-pneumonia	1	0			

Deaths in Institutions

	1901	1902
Albany City Hospital	13	13
Albany Orphan Asylum	1	2
County House	4	4
Home for Aged Men	2	0
Homeopathic Hospital	2	2
Hospital for Incurables	0	1
House of Shelter	0	1
Little Sisters of the Poor	3	1
Penitentiary	0	1
Public places	0	3
St. Peter's Hospital	7	3

Total number of deaths for October, 1902, 136; 1901, 126. Death rate for October, 1902, 15.38; for the same month last year 14.25. Death rate for October, 1902, less non-residents, 13.80.

BIRTHS

At term....83 Still....10 Premature....1 Total....94

Marriages	66

WORK OF HEALTH PHYSICIANS

Total number of calls made	240
Total number of assignments made	52
Total number of vaccinations made	21

INSPECTIONS

During the month of October there were 43 markets inspected, 20 pounds meat condemned, 3 milk rooms inspected, 28 milk peddlers inspected, 4 water peddlers, 1 fish peddler, 5 fish markets and 1 cow stable. There were found to be 3 milk peddlers' violations, 1 water peddler's violation.

There were 35 complaints made to the Department during the month, of which 5 were on account of privy vaults, 3 closets, 2 drains, 7 plumbing, 3 water, 2 filthy yards, 1 filthy vacant lot, 6 filthy premises, 1 gas, 1 chicken, 3 garbage, and 1 unclassified. Ten complaints were found to be without cause and 29 nuisances were abated, and 19 re-inspections were made.

In the Bureau of Drainage, Ventilation and Plumbing, 262 inspections were made, of which 156 were of old buildings and 106 new buildings. There were 42 iron drains laid, 37 connections made with street sewers, 47 tile drains, 37 cesspools, 65 wash basins, 73 sinks, 58 bath tubs, 50 wash trays, 111 tank closets, 153 permits were issued, of which 115 were for plumbing and 38 for building purposes. Thirty-three plans were submitted, of which 7 were of old buildings and 26 for new buildings. Seven houses were tested on complaint, by the peppermint test, and 10 water tests were made. Twenty-five houses were examined on complaint and 16 were found to be valid and 8 without cause.

CONTAGIOUS DISEASES

	1901	1902
Typhoid fever reported	11	13
Scarlet fever reported	3	7
Cases of diphtheria reported	89	59
Cases of chicken-pox reported	4	8
Cases of measles reported	3	0

Fumigations:

Houses.................... 44 Rooms.................. 109

Number of days quarantine for diphtheria:

Longest........ 35 Shortest........ 3 Average........ 18½

Number of days quarantine for scarlet fever:

Longest........ 59 Shortest........ 8 Average........ 30⅙

BENDER LABORATORY REPORT

Initial positive	Initial negative	Release positive	Release negative
38	30	60	53

Tubes spoiled............ 5

Total number of cultures......................... 186

DEATHS FROM CONSUMPTION—SEPTEMBER, 1870, TO NOVEMBER, 1902

	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
1870......									32	22	25	21	100
1871......	25	16	27	33	24	25	25	23	24	18	24	20	284
1872......	28	24	22	25	21	19	25	32	28	17	22	14	277
1873......	25	29	24	26	28	22	19	18	16	19	17	18	261
1874......	21	15	19	19	12	18	13	20	13	14	16	12	192
1875......	24	27	29	19	27	21	17	14	29	10	20	19	256
1876......	23	16	26	15	17	17	21	10	7	13	11	18	194
1877......	18	17	13	11	20	18	13	12	15	13	11	19	180
1878......	21	15	29	18	22	27	16	18	19	18	31	10	244
1879......	32	28	16	29	20	11	14	21	19	20	18	14	242
1880......	14	17	17	18	20	18	21	19	16	16	17	15	198
1881......	14	10	16	18	19	7	12	10	9	18	16	17	166
1882......	15	19	23	19	21	23	19	22	18	29	22	24	254
1883......	28	23	40	36	26	29	29	26	31	21	24	33	346
1884......	26	21	43	29	31	29	27	20	27	23	26	21	323
1885......	36	30	21	29	34	22	19	23	32	20	18	23	307
1886......	25	29	27	45	32	16	25	29	20	40	23	35	346
1887......	25	31	31	34	27	25	26	25	26	30	23	27	330
1888......	32	33	37	34	27	25	20	18	17	20	19	19	301
1889......	33	21	28	22	34	16	23	22	20	22	13	31	285
1890......	46	26	34	30	15	18	21	25	25	20	38	29	327
1891......	33	20	36	37	21	28	19	27	20	24	23	26	314
1892......	32	24	32	20	25	24	19	24	18	27	23	29	297
1893......	25	16	18	27	21	21	26	14	24	15	21	28	256
1894......	26	19	40	25	39	20	19	16	19	25	15	32	295
1895......	35	16	28	36	26	21	24	14	14	24	19	27	284
1896......	27	27	28	31	34	24	23	18	22	22	19	23	298
1897......	33	32	31	25	29	25	14	13	17	15	14	12	260
1898......	19	20	14	15	31	18	22	17	19	25	21	25	246
1899......	27	25	33	15	23	22	16	17	16	16	15	18	243
1900......	20	16	21	26	24	13	22	18	12	14	20	14	220
1901......	21	14	28	21	24	26	14	17	18	21	13	26	243
1902......	20	14	15	20	24	14	16	1	15	20			169

PREVENTION OF SMALL-POX

At a conference of State and Provincial Boards of Health of North America, held at New Haven, Conn., October 28 and 29, 1902, Dr. C. D. Probst, of Columbus, O., read a paper on some questions to be answered in dealing with small-pox. At the close of the discussion the following resolutions were adopted, which are of interest, particularly the first, in which vaccination is defined:

1. That vaccination may be defined as follows: An inoculation by scarification, puncture or injection, beneath the epidermis of a vaccine which produces, with some constitutional disturbance, a typical vaccine vesicle which leaves, after the pock is hard, its characteristic scar.

2. That in order to obtain the most satisfactory result, vaccine must be produced through the federal, State or provincial officials or by private producers under the closest supervision of qualified government officials.

3. That for the greatest protection against small-pox, state and provincial laws should provide machinery whereby certified public vaccinators can be appointed for a systematic vaccination by house to house visitation of all children born during any year and at public stations or otherwise, of such others as circumstances may make necessary.

4. That the evidence of successful vaccinations of all school children, naturally forms a part of any system of public vaccination and certificates of such should be accepted only when signed by the municipal or local health officer.

5. That in order that the best results may be obtained, it is essential that medical colleges should be urged to provide for thorough instruction in the theory and practice of vaccination, that all licensed physicians should hold certificates of having had practical instruction in the operation of vaccine in medical colleges, dispensaries or public vaccine stations.

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY

MEMORIAL MEETING FOR T. F. C. VAN ALLEN, M. D.

A special meeting was held in Alumni Hall, Thursday, October 30, 1902, at 5 P. M., President Ward in the chair.

There were present Drs. Babcock, Bartlett, Bendell, Blumer, Boyd, Carroll, Cook, Curtis, Elting, George, W. H., Goewey, Hale, L., Jenkins, Lempe, MacFarlane, Merrill, Moore, C. H., Murray, Papen, Sautter, Theisen, Vender Veer, A., Vander Veer, E. A., Ward.

Dr. **MERRILL** made the following remarks:

Mr. President and Members: In the death of Dr. Van Allen this Society has lost one of its most active, earnest and faithful workers. He joined the Society immediately after beginning practice in this city, and by papers and discussion contributed greatly to the interest and value of its meetings. His services were promptly appreciated by the members, and he was successively elected secretary, treasurer and president, which positions he filled with credit to himself and honor to the Society. During his administration the Society enjoyed a high degree of prosperity and its influence for good in the community was widely extended.

Dr. Van Allen was deeply attached to his profession, and, having thoroughly prepared himself for his special work by extended study at home and abroad, he soon won the confidence of the public and a prominent position in the profession, which early gave him a large practice.

His thorough and exhaustive investigation and kindly interest in his cases, whether rich or poor, won the respect and admiration of all his patients. He was a great reader and a close observer and a skillful operator, and was entitled to the marked success that rewarded his professional work. At the hospitals and dispensaries he gave freely of his knowledge and skill to the poor, even to the sacrifice of his own health.

As instructor in the Medical College he showed the same earnestness, thoroughness and enthusiasm that characterized his other professional work. Our emotions have been touched by his tender devotion to his aged mother, who watched, with breaking heart, his life ebbing away.

His high sense of honor, unfailing courtesy, happy disposition and cheerful spirit, as well as his intellectual gifts, endeared him to us, and we shall greatly miss his genial presence at the meetings of this Society.

As one who has known him intimately from the very beginning of his professional work to the end, I can gladly bear testimony to his thoroughness as a student, to his skill and ability as a physician and surgeon, to his devotion as a son, to his faithfulness as a friend and to his honor and integrity as a man.

The Secretary read the following letter from Dr. Tucker:

October 30, 1902.

Dr. A. W. Elting, Secretary,
Medical Society of the County of Albany, Albany.

My Dear Dr. Elting.—I very much regret that on account of the session of the Sanitary Conference, at which I am to read a paper this afternoon, it will probably be impossible for me to attend the meeting of the County Medical Society, called to take action on the death of Dr. T. F. C. Van Allen. My regret is great because nothing less than this engagement of long standing would have interfered with my showing this mark of outward respect to the memory of a man whose friendship I prized and whose virtues I admired, and adding some words to those which will be spoken by others, testifying to his noble character, high attainments and patient endurance under the suffering and distress of a long illness. His loss will be deeply felt and sincerely mourned by the many friends who knew and loved him, and his conspicuous virtues will be long remembered in our Society which he has served so well and in which he has so long been known and honored.

Yours very truly,

W. G. TUCKER.

Dr. VANDER VEER expressed his desire to emphasize the sentiments expressed by Dr. Merrill. Few men have received from the society as many honors as those conferred upon Dr. Van Allen. In all his work he always fulfilled his promises to the Society, and there are few men who have been so faithful in the performance of their duties. We shall miss him not only professionally, but socially.

Dr. BARTLETT spoke of his acquaintance with Dr. Van Allen when the latter was a boy, and even at that time of life the traits which characterized him in later years were very evident. These traits appeared to be inherited from his mother to whom he was always greatly devoted. Dr. Van Allen had a very strong mechanical instinct which pervaded all his operative and scientific work. It was not surprising that he received the honors that he did both from the Society and the profession, for he always merited them. He considered him not only a physician among physicians, but a man among men.

Dr. Bendell said that he became acquainted with Dr. Van Allen early in the latter's professional career and had been associated with him in the revision of the by-laws of the Society. He was always a frank man as well as an extremely honest man. At the bedside of a patient, where Dr. Bendell had frequently met Dr. Van Allen, he was always most considerate of the patient's interest and feelings, and in a true sense of the word a conscientious man and a good practitioner.

Dr. Lorenzo Hale remarked that, Dr. Van Allen's brilliant work in preparing fifty photo-micrographs of diatoms, which were thrown upon canvas by stereopticon, before the Medical Society of the County of Albany, on February 23, 1887, and which is described in full in Albany Medical Annals, March, 1887, was the result of a year's persevering and intricate work. "The present degree of perfection of our microscope objectives owes much to diatoms and to diatomists; and had it not been for the requirements of the diatoms and their observers, I question very seriously if we, to-day, would be able to gaze admiringly upon the graceful tail of the bacillus."

Dr. Merrill moved that a committee be appointed to draw up resolutions expressing the sentiment of the Society. Motion seconded and carried. The President appointed Drs. Merrill, Vander Veer and Bendell.

Dr. Curtis moved that the Society order that the portrait of Dr. Van Allen be published in the Albany Medical Annals. Motion seconded and carried.

Dr. Merrill presented the following resolutions, drawn up by the committee appointed:

Whereas, It has pleased Almighty God, in His wisdom, to take from us our honored friend and associate, Dr. T. F. C. Van Allen, a former president of this Society,

Resolved, That the Albany County Medical Society in the death of Dr. Van Allen has lost one of its most earnest and faithful members, one whose knowledge and skill in his chosen specialty won him high honor, and whose kindly heart and genial nature won our deep affection;

Resolved, That this Society, mourning the loss of our associate, tender to his aged, heart-stricken mother our sincere sympathy;

Resolved, That a copy of these resolutions be presented to the family, published in the daily papers and entered upon the records of the Society.

C. S. Merrill, M. D.
A. Vander Veer, M. D.
H. Bendell, M. D.

Resolutions seconded and carried.

Dr. Vander Veer moved that the officers of the Society, Drs. Ward, Boyd and Elting represent the Society at the funeral. Seconded and carried.

Motion to adjourn seconded and carried.

A regular meeting of the Society was held in Alumni Hall, on Wednesday evening, November 12, 1902. The meeting was called to order at 8:45 P. M., the President, Dr. Ward, in the chair. The following members were present: Drs. Babcock, Ball, Bingham, Blumer, Carey, Craig, Curtis, Davis, Dawes, Elting, George, L. Hale, W. Hale, Hinman, Jenkins, Laird, Lochner, Lomax, MacFarlane, C. H. Moore, Mosher, Pease, Shaw, E. Sweet, M. F. Sweet, Theisen, A. Vander Veer, Van Rensselaer, Ward, Wiltse; as guests, Berry and E. G. Griffin.

1. *Reading of the minutes of the last meeting.* The minutes were adopted as printed in the ALBANY MEDICAL ANNALS for November. 1902.

2. *Reading of the minutes of special meetings.* The minutes of the special memorial meeting for Dr. T. F. C. Van Allen were adopted as printed in the ALBANY MEDICAL ANNALS.

3. *Applications for membership.* No names were presented.

4. *Reports and resolutions.* None were offered.

Dr. HERBERT D. PEASE read a paper entitled "The Etiology of Malignant Tumors."

The PRESIDENT declared Dr. Pease's paper open for discussion.

Dr. BLUMER spoke of the few instances of artificial tumors produced by inoculation, which, in view of the number of inoculations made which were negative, can be considered as mere coincidences. Regarding the results of the successful tumor transplantations made by Hanau and Loeb, he thought they did not necessarily indicate a parasitic etiology. Regarding the so-called Russell's bodies, it may merely be noted that they have been found in tissues other than tumors. Regarding the finding of blastomycetes, it has been noted that they have usually been found in ulcerating tumors, and, furthermore, they were also found in the air in the laboratories in which these experiments were made. Within the past few months Dr. Moak has been studying the plazmodifora Boassissi and comparing them with bodies found in cancers coming to the laboratory, but no resemblance has been noted and these cancer bodies usually stain with fat stains.

Dr. JENKINS said that he had noted in tissues from a case of actiomycosis of the tongue epithelial structures resembling carcinoma, and he thought that if this condition could be produced by the actinomyces it might readily be produced by other parasites. He thought that in sarcoma if the irritant or parasite should lodge in the lymph space it might stimulate the endothelial cells and thus give rise to sarcoma.

Dr. BLUMER stated that the atypical growth of epithelium referred to by Dr. Jenkins as occurring in actinomycosis is not infrequently noted in other conditions and is not regarded as in any way related to carcinoma.

Dr. VANDER VEER thought the conclusions drawn by one so highly respected as the author of the paper should carry much weight. He felt that the careful work done and continuing to be done must eventually ravel the problem of the etiology of cancer. He was especially impressed by the views of Dr. Park, advanced originally, that there was much resemblance between plant and animal tumors. He referred to the numerous views that have from time to time been advanced during the past thirty or forty years regarding the etiology of cancer, and said that he hoped to live to see the day when the cause of cancer may be known. He has been much impressed by the fact that similar cases of cancer operated upon similarly sometimes remain free from recurrence and sometimes die as a result of recurrence. Other cases in which no operation is performed may live for years, while an apparently similar case dies in eighteen months. He is very thankful to Dr. Pease and appreciates deeply his work.

Dr. Spencer L. Dawes read a paper entitled "Varicella with a Report of an Unusual Epidemic."

The President declared Dr. Dawes' paper open for discussion.

Dr. Curtis said there was no question which interested health officers more than the one presented by Dr. Dawes. It was also of great interest to the practicing physician. He said that as he had been thinking the subject over he did not believe that he knew a single diagnostic point in varicella. He spoke of the initial fever which so often assumed to be a valid distinction between varicella and variola, but in his experience it was not to be relied upon. He has seen variola and varicella in the same patient at the same time. He has seen the rash of varicella take on the characteristics of variola. He had previously formulated certain rules for differentiating the two diseases, but has gradually been compelled to give up all the so-called characteristic diagnostic points. He said that the eruption of varicella is very likely to occur upon the palms and soles. He thinks the surest and most trustworthy indication is that varicella occurs at its inception as a vesicle and knows of no macular precedence, and the vesicles occur in successive crops. He thinks that certain abortive vesicles may simulate macules. About ten days ago saw a case in a physician about forty years of age who had an initial fever of two days which was followed by a typical varicellous rash. He referred to a leading authority, who stated that he had never seen a case of varicella in an individual over twenty years of age, and said that this opinion was held by many authorities, but was an erroneous view, for varicella does occur in adults. When it occurs in adult life the type of the disease is apt to be more severe. In adults there are cases of varicella which no one can possibly diagnosticate from variola, while on the other hand in children the differential diagnosis is comparatively easy. He feels confident that the two diseases are separate and distinct. He quoted Hyde of Chicago, who states that vaccination can be induced after an attack of variola, but it was the speaker's belief that this could not occur. He has been greatly interested in the subject, and especially in Dr. Dawes' paper.

Dr. Shaw wished to refer to certain features of an epidemic of varicella which occurred at St. Margaret's House during the past winter. In this epidemic there were three recurrent cases of varicella. One nurse maid who had been successfully vaccinated three weeks previously and who was over twenty years of age had a very severe attack of varicella. No child under seven months of age was affected with the disease.

Dr. Craig felt that no one could add much to Dr. Dawes' excellent paper. He thought that Dr. Curtis' remarks might do harm, because they would lead the physician to feel that there was no certainty in the diagnosis of the disease. It is only occasionally that one sees those cases of varicella in which diagnosis is difficult and the professional mind should not be rendered uncertain as to the possibility of diagnosis. He wished to ask Dr. Dawes whether he found any records of autopsies upon cases of varicella.

Dr. Dawes said that he had found one report of an autopsy.

Dr. Ward wished to agree with what Dr. Craig had said and felt that as a rule the diagnosis was easy and he also agreed with Dr. Curtis that there are a few cases in which diagnosis is most difficult.

Dr. Dawes, in closing, said that he did not wish to be understood as stating that as a rule the diagnosis was difficult, but felt that the attention of the profession should be drawn to the irregular types of the disease.

Moved to adjourn, seconded, carried.

Arthur W. Elting, *Secretary.*

Samuel B. Ward, *President.*

Medical News

Edited by H. Judson Lipes, M. D.

The Albany Guild for the Care of the Sick Poor; Statistics for October 1902.—Number of new cases, 53. *Classification of cases:* District cases reported by health physicians, 5; charity cases referred by other physicians, 21; total number of charity cases, 26; moderate income patients, 27; old cases still under treatment, 14; total number of patients under nursing care, 67. *Classification of diseases:* (New cases) medical, 13; surgical, 5; gynæcological, 4; obstetrical, 29; dental, 2; number of contagious diseases in medical list, 2; removed to hospital, 2; died, 4. *Visits of Guild nurses:* Number of visits with nursing treatment, 590; for professional supervision of convalescents, 112; total, 702. Cases were reported to the Guild by two of the health physicians and by sixteen other physicians; dentists, 2.

Special Obstetrical Department, October, 1902: The obstetrician and assistant obstetrician in charge of cases. Medical students in attendance, 5; nurses, 3; patients, 4. Number of visits by obstetrician, 17; by the assistant obstetrician, 2; by the medical students, 25; by the Guild nurses, 24; total number of visits for the month, 68.

Albany Hospital Training School for Nurses. — The sixth annual meeting of the Patronesses of the Albany Hospital Training School for Nurses was held in the hospital on Monday, November 3, 1902. The meeting was well attended and was presided over by Mrs. W. L. Learned. After listening to the reading of the minutes of the previous meeting by the secretary, Mrs. James McCredie, and the report of the treasurer, Mrs. S. W. Rosendale, the superintendent of nurses, Miss Emily MacDonnell, submitted a very carefully prepared report. This report showed that the school had now passed its experimental stage and was doing very efficient work. The school now consists of four head nurses, fifty-eight pupils, two probationers and one instructor in dietetics, making a total of sixty-five. Two patronesses had died during the year and three managers were elected.

Reception to Students and Faculty.—On the evening of November 6th Dr. Albert Vander Veer tendered a reception to the student body and the faculty of the Albany Medical College at his home. A most enjoyable evening was spent and without doubt the cordial relations of the student body and faculty were strengthened.

Plague in the United States.—Although there has been a great deal of apparent anxiety manifest throughout the country regarding the importation of bubonic plague, there is really but little cause for worry. Although the mortality has been exceedingly high, thirty-six deaths out of thirty-seven reported to the Surgeon General from December, 1901, to November, 1902, they have all been located in San Francisco and have all been confined to the Chinese district where they have been closely watched by the medical officials of the Marine Hospital Service. The French Commission has concluded that the spread of the bubonic plague is due to the fleas found on rats and not to the rats themselves. This theory was advanced by Mr. Plummer, of Hong Kong, during the epidemic of 1894, at which time the idea was scouted. The public health reports issued at Washington under date of October 17, 1902, contain directions for combating plague as approved at a session of the Federal Council (Bundesrath) on July 3, 1902.

Care and Treatment of Epileptics.—The second annual meeting of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics was held November 5, 1902, in the rooms of the New York Academy of Medicine. There were many prominent specialists from the United States and Canada present and a number of valuable papers were presented, among which were the following: "The Surgical Treatment of Epilepsy," by Dr. Roswell Park, of Buffalo, N. Y.; "The Causes of Epilepsy in Early Life," by Dr. Abram Jacobi, of New York; "The Pathology of Epilepsy," by Dr. Adolf Meyer; "The Problem of Epilepsy and Some Suggestions as to Its Solution," by Drs. L. Pierce Clark and Thomas P. Prout.

Doctors Combine to Fight Trachoma.—President Lederle, of the New York Health Board, has called a meeting of hospital physicians to devise means of assisting the dispensaries in treating the rapidly increasing disease, trachoma. There have been eight hundred cases reported this year against forty-two in 1901. This disease has spread to rather an alarming extent among the school children.

A New Death Certificate Form.—The State Department of Health has made several attempts to prepare a form of death certificate that will prevent the many errors which are constantly occurring in the reports of deaths in this State. The new form will closely follow in arrangement that recently prepared by the American Health Association, but will not depart essentially from those heretofore used in the nature of data sought. The new forms are now to be had upon application.

A NEW GERMAN STATE SANATORIUM.—The delegates to the International Tuberculosis Congress, which met at Berlin during the latter part of October, inspected the new sanatorium which is being built at Belitz, near Potsdam. This institution will accommodate six hundred persons, one-half suffering from tuberculosis and the other half from chronic diseases of the nerves, heart, kidneys, etc. The institution is designed for working men especially, the State maintaining the theory that it is an economic duty to restore to health the head of a family or any skilled worker. It is to cost $2,500,000.

A MOVEMENT TO PREVENT THE CONTAMINATION OF FOODS.—At a recent meeting of the Womans' Health Protective Association of New York the president announced that the board of directors was formulating a plan which it hoped to urge upon our legislators to secure legislation prohibiting the display of eatables in front of groceries, meat shops, etc. There is no doubt that fruits, vegetables, etc., so placed are certain to collect all sorts of impurities extremely injurious to health.

PERSONAL.—Dr. ELBERT G. VAN ORSDELL (A. M. C. '02), has opened his office at No. 756 McDonough street, Brooklyn, N. Y.

NOTICE OF ERROR.—In the ANNALS for November Dr. WILLIAM W. SANFORD (A. M. C. '99), was credited with an appointment as junior assistant physician at Long Island State Hospital. This should have read "WALTER H. SANFORD."

Book Reviews

The International Text Book of Surgery. By American and British Authors. Edited by J. COLLINS WARREN, M. D., LL. D., and A. PEARCE GOULD, M. S., F. R. C. S. Volume I., General and Operative Surgery. Volume II., Regional Surgery. Philadelphia: W. B. Saunders & Company, 1900.

Although there are already in the English language a number of excellent works on surgery, there is nevertheless, a large place to be filled by these two volumes which present the latest and most modern ideas advanced by surgeons all over the world.

The transitions which mark the progress of surgery are so striking and the advances so rapid that no one man can compass all that is best and so it happens that volumes written as these are by a large number of contributors are especially valuable and instructive. The contributors to the work number fifty-five and so far as possible it has been the effort of the editors that each of the collaborators should devote his attention to some branch of the subject in which he is especially interested.

These fifty-five names include the most prominent American and English surgeons and thus the volumes reflect the best of both American and English ideas and methods.

The editors have exercised great care in the arrangement of the work, and have been exceptionally fortunate in being able to obtain articles of such uniformity of standard.

Much attention has also been paid to the relative importance of the different departments of surgery, so that one subject is not exhaustively described at the expense of some other equally or more important subject.

Volume I is subdivided into twenty-eight chapters which treat of surgical pathology and general surgery. Beginning with surgical bacteriology, there follow chapters on inflammation, suppuration, surgical pathology of the blood, wounds, contusions, etc., and the constitutional reaction to wounds and their infections. Other chapters are devoted to the chronic inflammatory processes, the chapter on tuberculosis being an especially instructive one.

Anæsthetics and the technic of aseptic surgery are the subjects of valuable chapters.

Eight chapters are devoted to the surgery of bones and joints and in each instance the general symptoms of fractures, dislocations or other disturbances are presented, following which the symptoms as presented in disturbances of individual joints are discussed.

The volume concludes with chapters in which the surgery of the muscular, nervous, circulatory and lymphatic systems is considered. This volume contains 947 pages and is provided with 458 excellent illustrations in the text and 9 full page plates in colors.

Volume II treats of regional surgery and is subdivided into 33 chapters. Beginning with chapters upon the surgery of the mouth, pharynx and their contained and contiguous structures; there follow chapters upon the surgery of the nose, neck and œsophagus. Surgery of the thorax and breast is followed by 13 chapters devoted to the surgery of the abdomen and the contained viscera.

This group of chapters begins with an excellent treatise upon the technic of abdominal surgery as well as the diagnosis of abdominal disease and is followed by chapters upon peritonitis, intestinal obstruction, surgery of the stomach and intestines, the vermiform appendix, the liver, pancreas and their appendages, hernia, the rectum and the genito-urinary system.

Three excellent chapters are devoted to gynecology and present in a general way the most important surgery of the female generative organs. Gonorrhœa and syphilis are the subjects of separate chapters, following which the surgery of the eye, the ear and the skin is considered.

Military and naval surgery are instructive chapters and are followed by an excellent treatise upon traumatic neuroses, which have come to play so important a role in medico-legal surgery.

The volume concludes with a somewhat novel, but very instructive chapter upon tropical surgery in which the class of cases most often seen in the tropics, as well as the difficulties and dangers of surgery in these regions are briefly discussed.

Volume II contains 1072 pages and 471 illustrations in the text with 8 full page colored plates.

The illustrations in both volumes are excellent and serve to emphasize and impress upon the reader the salient features of the subject matter.

The discussion of all the subjects in both volumes is brief but adequate, and especial attention is devoted to the diagnosis and treatment.

The different methods of management or treatment are not exhaustively presented, the authors rather preferring to present in sufficient detail one or two well recognized and satisfactory methods.

Practically no attention is paid to historical or antiquated methods or operations and thus the reader is enabled to gather all the essential information in the shortest space of time. As a universal text book, as well as a work of reference, the work is to be highly commended and everyone who has to do with surgical disorders will find these to be extremely valuable volumes

The publishers have done their work in a most creditable manner and have produced a substantial contribution to the literature of surgery.

A. W. E.

Current Medical Literature

MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

A Contribution to the Study of Intestinal Sand.

DYCE DUCKWORTH and ARCHIBALD E. GARROD. *The Lancet, March 8, 1902.*

The basis of this paper is the investigation of a patient who presented the symptom of discharge of intestinal sand. The features of the case were a prolonged duration of intestinal indigestion, with diarrhœa and discharge of mucus and sand from the bowel. There was a distinct family history of gout. When washed and dried in the air the gritty material passed with the motions had the appearance of fine sand. Its ground color was a deep brown with an admixture of pale or almost colorless particles. Under a low power the individual granules had a great variety of shapes,—roughly oval, oblong, rod-like or irregular. Some were translucent and others opaque. When treated with an acid beneath a cover glass the particles became surrounded with groups of bubbles, and the solution of the inorganic constituents left an organic basis. The inorganic substance consisted of calcium oxide, phosphorus pentoxide, carbon dioxide and traces of magnesium and iron.

Two distinct classes of material have been described under the name of intestinal sand, which may be conveniently described as *true* and *false* sand respectively. *False* intestinal sand is composed of remains of vegetable foods which have resisted the action of the digestive fluids and which may or may not have acquired some incrustation of the earthy salts. *True* intestinal sand has no such vegetable basis, and owes its hardness and grittiness to the much larger proportion of inorganic material which it contains. The organic basis of such sand is clearly of animal origin. There is much that points to its origin in the intestinal tract. It is practically always met with in intestinal disorders and usually with muco-membranous colitis. The character of the organic basis and the large numbers of bacteria included point to the intestine as the probable seat of origin. The nature of the contained pigments suggests the colon as the most likely seat of formation and the anatomical structure of the large bowel may be looked upon as more favorable than the small intestine for the deposition of the earthy salts of which the material is so largely composed.

The Hæmo-Leucocytic Formula of Mumps. (Formule Hemo-Leucocytaire des Oreillons.)

E. Sacquepee. *Archives de Médecine Expérimentale et d'Anatomie Pathologique, Tome XIV, No. 1, 1902.*

The author carefully studied the blood changes in twenty cases of mumps occurring in individuals between the ages of 21 and 23 years. He divides the cases into two groups:

1. Mumps without orchitis.
2. Mumps with orchitis.

The blood count in cases of uncomplicated mumps showed a moderate leucocytosis in most cases. In some cases practically no leucocytosis was present, but in the majority the leucocytes varied from ten to thirteen thousand per cubic millimetre. This leucocytosis was most marked at the beginning of the disease. The differential count showed that this was not a pure leucocytosis. On the other hand it was found that there was a distinct decrease in the number of polynuclear leucocytes, whilst the lymphocytes and medium sized mononuclears were increased in a ratio proportional to the decrease in the polynuclears.

In five cases of mumps complicated by orchitis, it was found that a much more marked leucocytosis was present, reaching in some cases as high as 18,000, and at the same time the differential count showed that the leucocytosis was a pure leucocytosis, the polynuclears being distinctly increased at the expense of the mononuclears. In other words, in uncomplicated mumps there is a leucocytosis with increase of the mononuclear elements, particularly the medium sized and small, at the expense of the polynuclears, whilst in mumps complicated by orchitis the ratio of leucocytes is exactly transposed.

The Hæmo-Leucocytic Formula of Scarlatina. (Formule Hemo-Leucocytaire de la Scarlatine.)

E. Sacquepee. *Archives de Médecine Expérimentale et d'Anatomie Pathologique, Tome XIV, No. 1, 1902.*

Sacquèpèe investigated the quantitative and qualitative changes in the leucocytes in fourteen cases of uncomplicated scarlet fever, and four cases in which complications were present. All the observations were made in individuals between 20 and 22 years of age. He divides the blood changes into those occurring in scarlatina with the regular evolution, and those occurring in scarlatina with complications.

In uncomplicated scarlatina he found a marked leucocytosis, the most elevated counts occurring during the first days of the infection. During the first days the leucocytosis was generally more than 15,000—in some cases it reached as high as 30,000. He could not find any constant relation between the gravity of the disease and the degree of leucocytosis, although the high leucocyte count occurred preferably in cases of hyperpyexia. Differential counts showed that in the early stages of the disease the polynuclear leucocytes were very much increased at the expense of the mononuclear elements. As the polynuclears returned to normal, the mononuclears also returned to normal. In the later stages of the disease he found a distinct increase in the number of eosinophiles in the blood. These usually appeared quite suddenly, about the fourth or fifth day. As many as 13 per cent. of eosinophiles was present in some cases. The eosinophilia persisted in some cases for some time after recovery.

In the complicated cases of scarlet fever he found that in those in which the complication took the form of an inflammatory condition the polynuclear leucocytosis tended to persist much longer than in uncomplicated cases. In a fatal case there was leucocytosis without increase in the polynuclears, but the blood contained in this case very large numbers of leucocytes, which the author stated represented a form intermediate between polynuclears and mononuclears. The author thinks the examination of the blood in scarlet fever will be of most value in doubtful cases where after the fourth or fifth day the eosinophilia will be of diagnostic aid, and in grave cases where the presence of large numbers of intermediate forms of leucocytes will render the prognosis bad.

The Therapeutic Use in the Acute Infectious Diseases of a Specific Human Blood Serum of Convalescents. (*Therapie mit specifischem menschlichen Reconvalescentenblutserum bei akuten Infektionskrankheiten.*)

E. Walger. *Centralblatt für innere Medicin, 15 February, 1902.*

The writer first announced this theory in 1898, and since that time has carried on investigations which permit him now to summarize the results in the following twelve theses:

1. The local changes in the acute infectious diseases (exanthems, pneumonic infiltrations and the like) are not the essence of the disease, but rather the attempt on the part of the organism to eliminate from the body a greater or less amount of toxines and toxine-producers.

2. By the elaboration of the toxine by the irritants as highly organized chemical bodies the production of heat in the organism is markedly in-

creased by chemical activities, this increase showing itself outwardly as fever.

3. The efforts of the organism toward healing are thus directed toward rendering harmless the toxines by chemical changes and then by efforts at their elimination from the body. This elimination takes place by means of all excretions and secretions, especially through the sweat, and further by local changes by which the toxine-builders are also eliminated. By these attempts at elimination on the part of the body and the highly increased activity of the cells the production of heat is increased, as is manifested by the presence of fever.

4. A very energetic endeavor of the body, accompanied by great wear and tear upon the general state, is consequently made to transform the toxine by further chemical changes, which produces a further production of heat as indicated by fever.

5. This transforming of the toxine results from the irritation which the micro-organisms exert upon the body which is biologically necessary in high degree.

6. As soon as the elaboration of the toxine is complete, the further capacity of the micro-organisms is inhibited by the presence of the toxine. No further toxine can be formed, and only in this way can recovery be produced. We have consequently to deal not with antitoxins, but in all probability with bactericides. If this construction of the toxine can not be effected by the body, then there can not naturally ensue healing, for, in spite of all the efforts of the body at the removal there will always be an elaboration of new toxine.

7. After the formation of the toxine is completed, the blood serum may be used for purposes of healing. If a moderate amount of this toxine be injected into the body of a person suffering from the same infection, at once the capacity of all the micro-organisms occupying the body is inhibited. The excitant can no more toxine introduce, but it immediately suspends the elaboration in the body of the toxine already present.

8. From this it follows, that a recovered case, so cured by serum, cannot furnish again any recuperative serum, since there is no further elaboration of the toxine after the injection of the serum.

9. After the injection of serum the body only retains the power to reject the circulating toxine which is easily successful. This effort at elimination is the only reason for the persistent and often increasing fever which follows the injection.

10. Just as a patient cured of disease by a serum injection leaves no available serum, so there are presented numerous patients who have attained a natural cure, who provide no available serum.

11. Cases from which an effective serum can be obtained are for a longer or shorter time after recovery immune, depending upon the form of disease.

12. Patients whose recovery is due to serum injected are not immune.

NEUROLOGY

Edited by Henry Hun, M. D.

The Tibialis Phenomenon and Related Muscular Associated Movements in Spastic Pareses. (*Ueber das Tibialisphänomen und verwandte Muskelsynergien bei spastischen Paresen.*)

A. STRUMPELL. *Deutsche Zeitschrift für Nervenheilkunde, Band XX, Heft 5 u. 6, 1901.*

Strümpell described in 1887 a form of associated movement, occurring in certain nervous diseaeses, to which he gave the name "tibialis phenomenon," and which consists of a contraction of the tibialis anticus, so strong as not to be overcome by pressure, when the thigh is flexed upon the trunk. This symptom is elicited as follows: the examiner stands at the side of the bed upon which the patient is recumbent, and places one hand lightly upon the thigh and the other upon the dorsum of the foot. If a healthy limb be examined, it will be found that when the thigh is elevated the foot remains in negative plantar flexion. If a limb affected by some form of spastic palsy be examined, when the thigh is flexed, there occurs a strong associated contraction of the tibialis anticus, so that the inner border of the food is drawn forcibly upward, against the pressure of the examiner's hand. Resistance to the flexor movement of the thigh by the hand placed upon it increases the intensity of the tibialis spasm. The peronei do not participate in this associated movement. The explanation of this phenomenon is the inability of the patient to innervate separately muscles which usually act coöperatively, as the ileo-psoas and the tibialis anticus. The truth of this has been shown further by the fact that attempts at flexion of the foot dorsally cannot be successful unless the limb is likewise flexed at the knee and hip. The patient finds that he cannot voluntarily innervate both the psoas and the tibialis anticus, separately, though the associated movements of both of these muscles are easily attained.

This tibialis phenomenon is present in conditions in which Babinski's sign is also found, and the author believes it to be due to lesion of the pyramidal tracts. These tracts are probably not the only carriers of motor impulses from the brain. Among other reasons for this belief he calls attention to the fact that they are undeveloped in early infancy, and at this period of life the tibialis phenomenon and Babinski's sign are elicited. The babe, however, is not defective in motion of the lower extremities, but on the contrary these are exceedingly active. The movements are not finely adjusted, and as the pyramidal tracts are developed the child is learning to control and regulate the purposeful movements of the extremities, so that these tracts appear more properly to be allied with the function of the fine adjustment of complicated associated movements of the muscles. Strümpell gives other reasons in support of this view, among them a consideration of the anatomical conditions, and closes his paper with a description of certain analogous phenomena presented in the upper extremities, which he describes as (1) the "radialis phenomenon," in which the extensors of the wrist contract upon efforts to make a fist; and (2) the "pronation phenomenon," in which efforts at lifting the supinated arm to the shoulder are accompanied by a movement of involuntary pronation.

The writer in conclusion shows the diagnostic value of these "associated movements," in the distinction between organic and functional disease. The presence of the tibialis phenomenon speaks definitely for an organic lesion of the brain or cord, and in all probability of the pyramidal tracts. It has served the author well in the differential diagnosis in accident cases.

Volkmann's Contracture.

LEONARD S. DUDGEON. *The Lancet, January 11, 1902.*

This deformity, which was first described by Professor Volkmann, is said to be rare, but probably occurs more frequently than supposed, on account of ignorance of the condition. The writer reports several cases and reviews the literature, which is not voluminous. The disease is defined as "a contraction of the fingers and sometimes of the wrist, which comes on rapidly with loss of power, which is not absolute in the forearm muscles, after a severe injury, usually in the region of the elbow joint, generally in young children." The deformity is due to changes in the flexor muscles without injury to the peripheral nerves caused in many cases by tight bandaging and pressure of splints. The symptoms develop rapidly, sometimes in half a day or less. The great feature is in the onset of paralysis with contracture; the fingers sometimes blacken and swell; there is rarely any pain; there is often sloughing of the skin. The fingers are at first simply flexed, but soon pass into characteristic position, which is described as follows: the wrist is extended, as are the metacarpo-phalangeal joints; the inter-phalangeal joints of the fingers and the terminal joint of the thumb are strongly flexed, so that the tips of the fingers touch the lower part of the palm, and no reasonable amount of force seems capable of straightening them, but as soon as the wrist joint is flexed to a right angle the inter-phalangeal joints may be easily extended. The hand is pronated and the forearm is generally semi-flexed. Sensation may be normal or there may be partial or complete anæsthesia. The electrical reactions are generally unaltered. Physiologically the condition is regarded as myositis of ischæmic origin. The differential diagnosis must be made from isolated or combined palsies of the nerves of the upper extremity. This is not difficult in ulnar and median paralyses, and in musculo-spiral paralysis the contraction of the wrist is due to paralysis of the extensors and not to contracture of the flexors, except secondarily. Gowers has also directed attention to the characteristic attitude in wrist drop indicated by a greater involvement of the fourth finger, and the gradation of the flexion from the first to the last finger. The prognosis is generally regarded as hopeless, but the writer has had some successful cases, the most effective treatment being prolonged massage and passive movements. Operative treatment later may be helpful.

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